

The Impact of Spatial Design on Teacher Communication: A Case Study

A Thesis

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by

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ABSTRACT

This study is a pre- post case study in two elementary schools examining the impact that school design can have on the informal communication of teachers. In the fall of 2012, students and teachers from two schools in northeastern United States were moved from schools with traditional, double-loaded corridor designs to schools with a non-traditional “learning commons,” in which traditional library components, media spaces, and group break-out areas are incorporated throughout the school. It was hypothesized that informal teacher communication and perceived support of collaboration would increase in the new facilities as measured by scores on a Teacher Collaboration Scale, instances of communication logged over a two week period, observations, space syntax analysis, and interviews/focus groups with teachers. Specific attention was paid to identifying the spatial and organizational prerequisites of informal communication. While the hypothesis was partially supported, the study resulted in various implications for school design and organization such as creating shared space by centralizing service areas, limiting movement options by designing singular paths, encouraging overall movement by the strategic positioning of “specials,” creating shared time through purposeful scheduling, and providing teacher training on collaborative space use and communication expectations.

BIOGRAPHICAL SKETCH

Raechel Schneider was born in San Antonio, TX and apart from a short stint in Ohio grew up in various Texas cities. She graduated from Texas A&M University in 2011 with a Bachelor of Science in Psychology and a Bachelor of Environmental Design in Architectural Studies. Unsatisfied with the lack of user-focus in her architectural studies and unwilling to choose between two passions, she ventured to the Department of Design & Environmental Analysis with hopes of learning more about the planning process in design and how to better integrate the specific needs of users. She finished her MS at Cornell in August 2013 and is now putting her degrees to work, helping make schools better one building at a time.

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DEFINITIONS

Teachers' Room:	A break/lunch room that is available to teachers throughout the entire school day.
"Specials":	Courses which are not part of the core curriculum and occur outside of the students' home classroom. These include but are not limited to art, music, and gym.

Introduction

This study uses a pre -post case study to examine the impact that school design can have on the collaboration of teachers. Research has shown that there are various spatial characteristics linked to collaboration in the workplace and that spaces in which more spontaneous interaction is supported also promote improved collaboration among employees. Pulling from such research on office workplace design, this study focuses on spatial characteristics of schools such as the proximity between classrooms/teachers, visibility, and the amount of spaces provided for informal interaction and group work. Schools were selected via a convenience sample through the architecture firm designing the new buildings. This provided a unique opportunity to keep the participant pool constant and have a true pre -post study design.

In the fall of 2012, students and teachers from two schools in a school district located in northeastern United States were moved from schools with traditional, double-loaded corridor designs to schools with a non-traditional “learning commons,” in which traditional library components, media spaces, and group break-out areas are incorporated throughout the school. Floor plans of the schools are found in Appendix A.

The designs of the new schools were driven both by school district goals and the design experience of the architects involved. While the libraries were an important part of the original schools and the curriculum of the students, they were visited quite sparingly and, in light of more and more technological advances, became less crucial in the day to day lives of students and teachers. Thus, the architects were tasked by the superintendent of the school district to rethink the traditional library’s programming in

order to reduce square footage while still providing the necessary amenities for students and teachers. A specific goal of the school district also communicated to the architects was the need to create more opportunities and support for teacher to teacher collaboration and teacher to student collaboration. The architects' response to these requirements was the learning commons studied in this thesis. The computer labs were removed and each classroom given a few laptops and each student given an iPad. The library was replaced with a smaller book room and project areas were included into the circulation space in the school. Classroom square footage was slightly reduced in order to have every two rooms cluster around small group break-out rooms.

One of the intentions of the new designs was to increase the visibility of the teachers to one another in hopes of fostering higher levels of spontaneous and continual collaboration. A huge lack of spatial opportunities for teachers to collaborate was missing at the old facilities. A report presented by the school board outlined the school district's plan to open new school buildings that are focused on having "a full-time faculty able to collaborate around the needs of children" through a positive social/emotional environment. To meet this end, the architects designed clustered classrooms with indoor windows that allow for visibility of other teachers as well as more awareness of all students, not just those in one's own classroom.

While collaboration is the overarching concept this thesis supports, it does so through the lens of informal communication. It is important to note that informal communication and collaboration are **not** synonymous. However, a main driver of this thesis is that informal communication can be a tool to support the collaborative processes that many schools already implement. In other words, collaboration

typically refers to structured initiatives driven by the school administration. Informal communication, however, refers to the spontaneous interactions of teachers throughout their school day. This thesis assumes that these spontaneous interactions will help fill the gaps in impacting the culture of the school that traditional structured collaboration often fails to achieve. This being the case, both collaboration and informal communication are dependent variables in this case study, both measured using multiple methods.

Data, consisting of communication logs and a Teacher Collaboration Scale (TCS), was collected in the spring of 2012 in the original school buildings with traditional designs and in the spring of 2013 in the new buildings with learning commons designs. The communication log tracked the instances and locations of teacher communication and the collaboration scale measured the overall opinion of collaboration support and occurrence at the school. Space syntax theory was also be used to compare the integration, flow, and depth of the schools' designs, which will be compared with communication pattern data. The space syntax analysis provides a prediction of how many people should travel through a space and thus, the potential for communications to occur based on various spatial characteristics (e.g., connection of spaces, distance between rooms, width of hallways, etc.). Research observations were completed in both new schools to see if the results of the other data collection methods are supported. Interviews and focus groups were also completed to supplement the quantitative data. This study results in a better understanding of which spatial and organizational factors contribute to the communication patterns of teachers.

Literature Review

The Importance of Teacher Collaboration

While teaching itself can be considered a somewhat autonomous act, collaboration and learning from other teachers outside of the classroom can be a key component of maintaining excellence as an educator and increasing knowledge sharing can aid in moving teachers to a realm of higher professionalism. Pugach & Johnson (2002, p. 6) summarized this nicely stating that “in collaborative work environments, teachers have the potential to create the collective capacity for initiating and sustaining ongoing improvement in their professional practice so each student they serve...can receive the highest quality of education possible.” This movement from autonomy to collaboration has proved to be more lasting than just a trend and there is now call for more analysis into the intricacies behind the new collaborative cultures of many schools (Admiraal, Akkerman, & Graaff, 2012; Doppenberg, den Brok, & Bakx, 2012; Lingo, Barton-Arwood, & Jolivet, 2011; Parise & Spillane, 2010; Parsons & Harding, 2011).

Collaboration has many definitions. A basic definition of collaboration is a group working together. Others have defined it as the voluntary engagement of equal parties working toward a common goal (Friend & Cook, 1992). Taking this one step further, Goulet, Krents, & Christiansen (2003) defined collaboration as not only groups of people working together but defined it as an action resulting in some kind of change in the participants. Collaboration can even be defined and categorized in strict terms in regards to the context. Goddard, Goddard, & Tschannen-Moran (2007)

designate four categories of collaboration: teachers working with special education support, team models, teams implemented by the administration, and discussions around planning. The combinations and depth of definitions are endless in the literature (Doppenberg et al., 2012; Friend & Cook, 1992; Goddard et al., 2007; Goulet et al., 2003; Little, 2002; Parsons & Harding, 2011). For the purposes of this study, collaboration will be defined as two or more teachers working together, either formally or informally, in order to reach a common goal.

The benefits of collaboration are far-reaching. Self-efficacy has long been known to have a positive impact on quality teaching and much evidence has pointed to a direct link between collaboration and self-efficacy (Chen, 2011; Shachar & Shmuelevitz, 1997; Tschannen-Moran, 2001). Research has also shown that collaboration helps foster a more social, supportive environment among teachers, something especially poignant for first time teachers (Rosenholtz, 1989; Tschannen-Moran, 2001). This can have consequences which trickle down to increased morale throughout the school and more engagement among students (Parsons & Harding, 2011). On an individual level, analysis of various attempts at educational change show that collaboration can even help teachers be more amenable to reform movements (Little, 1993). Despite these inarguable benefits resulting from increasing collaboration levels between teachers, one of the most poignant in light of student academic success is the resulting knowledge-sharing activities that go along with collaboration. Specifically, such collaborative knowledge sharing activities were shown to be a strong predictor of change in the teaching of math and language arts (Parise & Spillane, 2010). Additionally, social network theory has begun to shed some

light on the benefit and the process of knowledge sharing. From the view that teachers communicate in order to share resources (e.g. their knowledge, teaching practices, etc.), social network analyses of schools confirm that the pattern of relationships among teachers has an impact on instructional practice which trickle down to impacting student performance (Moolenaar, 2012).

This link between teacher collaboration and student achievement has not been directly addressed within the literature but is typically assumed to be a natural byproduct of collaboration (Goddard et al., 2007; Parise & Spillane, 2010). However, a few studies have been completed which make the link more resolute. For example, Smylie, Lazarus, and Brownlee-Conyers (1996) concluded in a four-year longitudinal study in a K-8 school district that increasing teachers' accountability through more participatory decision-making resulted in instructional improvements and an increase in teacher-reported student outcomes as well as an increase in reading and math standardized test scores. One caveat to these results was an opposite result in schools in which the participatory processes were poorly implemented and became more distracting than helpful in regards to improving teacher instruction. More recently, Wheelan & Kesselring (2005) found that when faculty groups begin to function as more trusting and cooperative, student outcomes improved, as measured by their meeting proficiency standards. The caveat again here was that the work groups cannot simply be formed but must also function as intended. While indicating the need for more in-depth research, these findings only corroborate the relevance of the study at hand as it seeks to document support for purposeful systematic approaches to collaborative efforts.

The exploration into collaboration is a timely topic in light of the push for “21st Century Learning.” 21st Century Learning is defined by the Partnership for 21st Century Skills as education that provides students the “essential skills for success in today’s world, such as critical thinking, problem solving, communication and collaboration” (*P21 Framework Definitions*, 2009). While the focus here is on students learning to collaborate in the new global and technology driven world, it is important that teachers be equipped to teach such skills and be able to serve as a model of effective collaboration to their students (Darling-Hammond, 2013). Much of the 21st Century Learning push is actually led by the architects. Design is becoming a large driver of the collaborative environment now called for by many districts. However, what often occurs is that collaborative spaces are designed for, whether by the architects’ insistence or by the district’s request, but then no further action is taken to insure their use. Architects today are in a unique position to have more than simply a spatial impact on schools but could instead take more strides to insure schools and teachers understand the intent behind their designs.

A key question that remains though is to what extent collaboration is valued and desired by the teachers themselves. Evidence for the benefits of teacher collaboration has been building over the previous decades and there is little doubt that it is an important element in the successful implementation of 21st Century Learning. The value it all really has is not quite as clear due to lack of research and lack of a common agreement on how each district specifically defines collaboration. Bacharach (1986; as cited in Sherril, 1999) did find that teachers felt that “the best way to go about improving their professional practice [was] to spend more time learning from

and working with colleagues” (Sherrill, 1999, p. 57). More recently, however, the National Center for Literacy Education (NCLE, 2013) completed a nationwide survey to determine where our nation’s teachers currently stand in regards to training and resources, school structure, and support for collaboration. All were asked in reference to literacy learning but the findings are generalized to K-12 education in general. The findings were extremely telling, identifying co-planning as the most valuable professional learning experience especially among administrators. When asked why co-planning was chosen, the top three responses were: 1) “Helped me create new lessons, materials, or instructional strategies for immediate use,” 2) “Provided opportunities for active learning discussion and reflection on my practice,” and 3) “Provided opportunity to collaborate with colleagues to create a support network” (NCLE, 2013, p. 11). Rosenholtz (1989, p. 73) stated that “collaborative settings...stress norms of continuous school- and self-renewal.” We are in the midst of a movement towards the professionalization of teachers, a movement that should be “local and teacher-led” (Parsons & Harding, 2011, p. 6). This means that there is call for teachers to be given more autonomy and trust in regards to their professional development of practices and curriculum. While professional development activities are common, they typically consist of brief top-down interventions. These have historically been viewed by teachers as “fragmented, disconnected, and irrelevant to the real problems of their classroom practice” (Lieberman & Pointer Mace, 2010, p. 77). Creating a collaborative culture has been utilized as a replacement for such formal development events. For such a culture to be successful, the focus of the collective should be to actively improve the overall collaborative nature of teaching and the

school organizations themselves, not just one teacher's own experience within the classroom (Pugach & Johnson, 2002). More attention must be paid in the way schools "equip teachers both individually and collectively to play an informed and active role in defining the enterprise of education and the work of teaching" (Little, 1993, p. 132).

One of the recommended ways to achieve this goal is the implementation of professional learning communities of teachers in which they continually work together and share knowledge of their best practices (Levine & Marcus, 2007; Lieberman, 1996). Others state that Action Research could be a solution and that it would create more opportunities for teachers to work together and solve their own problems (Parsons & Harding, 2011). Levine & Marcus (2007) group this potential movement into the trajectories of learning from sociocultural theory. This evolving movement fed by teachers' interactions with students and colleagues, the support of the school and community, and curriculum could lead to important changes in the schools we see today. It is here that autonomy and collaboration must come together. The key to the movement's success is the continual awareness of the systems nature of the school, a topic to be discussed in depth further throughout this literature review.

Informal Communication

Most of the initiatives currently in place involve the formal collaboration of teachers (Crow & Pounder, 2000; Goddard et al., 2007; Louis, Marks, & Kruse, 1996; Pugach & Johnson, 2002). This can include team teaching, regular scheduled meetings, or other planned development activities. However, commonly left out of the discussion is the value that impromptu and informal communication can add to the

professionalization of teachers and their knowledge-sharing practices. Learning is a social phenomenon and professional learning can be considered rooted in the “human need to belong, to make a contribution to a community, and to understand that experience and knowledge are part of community property” (Lieberman & Pointer Mace, 2010, p. 80). It is natural then to assume that integrating professional learning into the more natural daily interactions in which teachers participate will help aide the identification teachers have with the collaborative process.

An Education Week article finally shed some light on the benefits of informal communication and highlighted case studies in which informal communication was integral to the improvement of schools. One teacher lauded that “many of the best things [they did didn’t] happen in team meetings...the real collaboration happen[ed] outside (Honawar, 2008, p. 26). The schools owed success not only to the well-organized collaborative efforts of the administration but also to the new collaborative culture that resulted, encouraging teachers to relish in the serendipitous interactions with other teachers. These serendipitous interactions are the focus of this present study. While informal collaboration and communication can be somewhat synonymous, the study uses the phrase “informal communication” to refer to spontaneous interactions between teachers.

Susan Rosenholtz (1989) touched on the informal aspect of collaboration as the “social construct of teacher collaboration” and found that spontaneous teacher sharing (a construct synonymous with informal communication) correlated with the overall collaborative nature of the school. Many schools engage in a culture of isolation between teachers which transfers into a lack of more general social relationships with

fellow teachers. Other more cohesive schools saw higher levels of communication as an inherent part of their organization. More recently, research has focused on the differences school organization can have on the various types of collaboration in which teachers take part. For example, collegial support is a type of collaboration best supported through informal settings and an integral component in helping increase the interdependency among teachers (Doppenberg et al., 2012). In a large scale study of primary school teachers, Doppenberg et al. (2012) found that collegial support occurred less frequently than other collaborative activities due to lack of settings which support its occurrence. Thus, there is an opportunity for schools to take initiative in providing more opportunities for informal communications in order to increase the occurrence of collaborative displays such as collegial support.

While the importance of informal communication among teachers in schools has not been developed to its fullest potential, it has become a common topic of discussion in office workplace research. Research has shown that informal communication between employees in an office setting can lead to many of the same benefits that formal collaboration has shown to have in schools: higher morale, more engagement with the company, higher job satisfaction, and, most importantly to the company, higher productivity (Hua, 2010; Peponis et al., 2007). This current study proposes that many of these same benefits will be seen in schools if the informal communication between teachers is better supported.

A key difference between collaboration and informal communication is their prerequisites. While formal, top-down driven collaboration typically consists of scheduled meetings and formal initiatives which could occur in a multitude of

environments, research has begun to explore ways in which space can better aid successful collaboration. However, informal communication is a natural phenomenon which can be impacted by various spatial and organizational factors to an even larger degree. The following two sections discuss the relationship between various spatial and organizational factors with both informal communication and collaboration.

Spatial Prerequisites for Informal Communication and Collaboration

One product of research completed on informal communication in the workplace is new trends in office design. Space is becoming used as a tool to help afford for certain behaviors and in effect, proper spatial design is seen as a prerequisite for collaboration and informal communication. Allen and Henn (2007a, p. 19) stated that “a formal organizational structure may dictate what is supposed to happen, but whether it actually does happen is, in large part, an issue of space”. Accordingly, multiple studies use Space Syntax to analyze the impact that spatial layout has on social relationships within organizations (Appel-Meulenbroek, 2010; Peponis et al., 2007; Rashid, Kampschroer, Wineman, & Zimring, 2006; Sailer & McCulloh, 2012). Some point to the impact co-presence has on the amount of knowledge sharing that occurs in an office (Appel-Meulenbroek, 2010; Rashid et al., 2006), noting that knowledge sharing behavior differs greatly depending on the space. Specifically, the more connected spaces are to one another, both physically and visually, more opportunities for informal knowledge sharing exist and naturally, more knowledge sharing occurs. For example, movement paths with higher levels of visible co-presence (the number of people who can be seen along the route) were found to be correlated with higher levels of interaction in multiple types of office spaces (Rashid

et al., 2006). This is in line with the intuitive finding that employees interact more with others located on their same floor and within closer proximity (Sailer & McCulloh, 2012).

Specific spatial typologies are also beginning to emerge and supplement the aforementioned findings with actual design direction (Hua, Loftness, Kraut, & Powell, 2010). These typologies are complemented with parameters delineating potential impacts they can have on an individual's use and experience of the work environment (Hua, 2010). Many of the findings refer to the need to control access to the environment, have a choice in when and where to converse with others, the availability of a break area, an appropriate level of distraction, the variety of spaces available, and multi-use circulation spaces. Specifically, layouts in which there are shorter distances from a workstation to a meeting space have higher levels of perceived support for collaboration. Layouts in which a higher percentage of floor space is allocated for collaborative activities, especially informal ones such as amenity areas (e.g. coffee machines, couches) resulted in staff with higher levels of perceived support. Finally, layouts which had the most balanced score of collaborative support and distraction minimization tended to have longer distances between work stations and amenity areas (Hua et al., 2010).

A collaboration effectiveness model was created that measures how these workplace spatial settings interact with environmental factors, organizational design, internal processes, and psychological traits to impact the effectiveness of the organization (Hua, 2010). The various parameters were divided into various scales measuring employees' satisfaction with collaborative work environment, spatial

preference for collaboration, collaboration-related work experience, and their perceived collaboration effectiveness. This study is one of the few that consider a broader systems view of collaboration in addition to the study of the space itself. All of these are components of a school but their adjacency, affordances, proximity, and quality have not been studied in their relation to teachers' ability to communicate and effectively perform in the space.

The next step in generalizing the office workplace collaboration and design research to the educational sector will be to analyze more specific spatial layouts in schools and their impact on teacher communication. Gordon (2010) begins this conversation with basic discussions on the differences between classroom- and office-based workspaces for primary and secondary school teachers. However, the former category dominates in actuality with office-based layouts being very rare in the primary school system. Thus, more focus should instead be given to the broader layout of the school in general. However, the basic sentiment of Gordon's (2010) argument agrees with the well supported idea that shared spaces lead to higher levels of collaboration and informal communication among teachers (Gislason, 2009; Lieberman, 1996).

The aforementioned typology work completed by Hua et. al. (2010) focuses on teamwork-related spaces (e.g. conference rooms, team rooms), service-related spaces (e.g. print rooms, office equipment), and amenity-related spaces (e.g. coffee areas, lounges) and how different layouts correlate with their perceived support for collaboration. Similarly, schools can be divided into various spaces commonly used by teachers (e.g. work rooms, break rooms, copy areas, mail room) as well as newer

space typologies such as multimedia areas, student group project spaces, and open circulation space used by entire classes. Traditional schools with double-loaded corridors can be easily divided into common space typologies, such as classrooms, hallways, gymnasium, cafeteria, etc. However, this task is more difficult with unique facilities which begin to add more unique, flexible spaces. The design being analyzed in this study is coined as having a “learning commons” in which the traditional components of a library (e.g. multimedia areas, reading rooms, project areas) are integrated into wide circulation areas with classrooms clustered around them. Novel designs such as this are on the rise and it is necessary to begin exploring various ways in which to analyze their success at reaching their design goals, in this case, its success at increasing the ability for teachers to communicate, both formally and informally.

Organizational Prerequisites for Informal Communication and Collaboration

The collaborative push we see in schools today conflicts with the naturally autonomous nature of teaching as a profession. This autonomy runs deep and can be a reason why the profession was chosen in the first place and many teachers still value the idea of working in such an individualistic fashion more than their potential to help other teachers’ perform (Ertesvåg, 2011; Gates & Watkins, 2010). With this dichotomy in place, it is difficult for any of the current interventions designed to increase collaboration to become successful. One of the integral elements in a movement towards the increased professionalism of teachers, however, is an adjustment of a teacher’s ultimate goals and motivation – the basis of success cannot be a teacher’s own classroom but must instead be the school in its entirety. Gates & Watkins (2010) reviewed the literature regarding autonomy among teachers and

determined that the key to making professional communities successful is to have a clear overarching goal and common understanding under which the teachers continue to have autonomy. When a community is not successful and lacks support, it is considered “weak” and results in teachers who “retreat into their standalone practice and shy away from any future collaboration,” defeating the purpose of creating a community in the first place (Carroll, Fulton, & Doerr, 2010, p. 11). Thus, the opportunity arises for the administration to help instill this cultural and motivational change. However, it is difficult for teachers to have a naturally collective experience due to their disconnected hierarchy, cyclic nature of the school-year, and focus on teacher-student relations (Cattonar, Draelants, & Dumay, 2007).

Ensuring that intended changes are successful or, as mentioned earlier, spaces are used in the way intended by their designs is a difficult proposition in schools due to the loosely coupled nature of their structure (Weick, 1979). Loose coupling in this case refers to the relationship between the administrative powers of a school and the teachers who work within it. When the relationship is loosely coupled, they are still connected in regards to their rules and structure of the organization but lack necessary responsiveness and communications in the actual practices and events that occur. According to Meyer and Rowan (1977), formality in loosely couple systems can basically become a myth. In these situations, new decisions or changes may be made and never implemented oftentimes due to the lack of consultation with the impacted parties (i.e. teachers). Thus, buy-in is minimal and schools continue operating as always. Various factors also contribute to the degree of disconnect both between the administration and teachers and among the teachers themselves. Louis, Marks, &

Kruse (1996) stated that large school size, complex staffing, scheduling time constraints, and lack of teacher empowerment all negatively impact the development of professional communities. Time has been identified as the single most pertinent factor in inhibiting schools from adopting a collaborative culture (Darling-Hammond, 2013). Teachers are still spending 93% of their workday isolated from other teachers (MetLife, 2010). Further, almost a third of the teachers who responded to the NCLE survey stated they have less than thirty minutes of time allocated for collaboration for the entire work week (NCLE, 2013). However, the time a school does dedicate to structured collaboration positively correlates to teachers' and principals' perceptions of shared responsibility and accountability (MetLife, 2010).

While loosely coupled systems are not necessarily detrimental, they can be in situations where concrete changes are made which require additional organizational changes and thus, due to loose coupling, fail. This phenomenon was seen in the rise of open plan schools in the 1970s, a misstep in educational design. However, what was missing from their implementation was an adjustment in teaching practices and organizational structure (Clark, 2002; Cooper, 1981; Gislason, 2009). The architects who designed the facilities anticipated that the teachers would learn to use the spaces differently and adjust their teaching practices accordingly. As we know now, this wasn't the case and teachers continued to autonomously teach their courses instead of using the open floor plan for more team-based, collaborative activities. A lesson learned from this is that practices must adjust with any new spatial design or the design will fail, regardless of how excellent it may be and the potential benefits it could provide for educational practices. Further, even if a school does recognize that

teachers must teach more collaboratively, a loosely coupled system can prevent that goal from becoming a reality. The administration in these cases must do more than simply instate a policy or tell the teachers to collaborate more. The teachers must be taught how to do so and specific steps taken to instill the necessary change in culture. Thus, an ancillary goal of this study is to look at the ways in which the organization can help or hinder the adaptation to new school facilities.

Some work has already been done in creating a list of variables in which the school organization can control to create noticeable changes in teacher communication. Owens & Valesky (2011) identified control of time, the assignment of students, grouping, and control of resources as four means to bureaucratically influence teacher behavior. *Control of time* consists of managing teachers' schedules, required tasks, and special classes for the students. The *assignment of students* to teachers in terms of grade levels and quantity can also impact teacher behavior due to the various constraints and requirements certain class types dictate. *Grouping* is becoming common in regards to formal collaboration as teachers can be paired in teams. Finally, *control of resources* encompasses the amount and location of service areas and amenities available and overlaps with the spatial prerequisites of communication. This current study will explore these factors and identify which can have the most impact on teacher communication, specifically.

Training has also shown to have a positive impact on behavior and performance in the office workplace and much time has been spent in understanding the specific types of training which have the most benefit on certain behaviors or performance (Aguinis & Kraiger, 2009). However, what is left out of its scope is

training on the use of space or training on how to collaborate, especially informally. In a review of recent training literature, this potential benefit on communication was recognized as resulting in an increase in social capital. Basically, training could affect “important social processes that in turn are likely to affect organizational-level outcomes” (Aguinis & Kraiger, 2009, p. 459). One way in which to apply training is on select groups of teachers who would serve in leadership roles and models of effective collaborative behavior (Sherrill, 1999). An ancillary goal of this study is to call for research on such training and the role it can play in the better use of new school designs as it has the potential to be a key component in surpassing issues that arise in loosely coupled systems.

Gislason (2009) discussed that the two required factors for successful teacher collaboration was having both shared space and shared time. These two variables encompass the aforementioned need for attention to both spatial designs (i.e. proper collaborative spaces being offered throughout the school) as well as include discussion of organizational support (i.e. providing teachers with the time needed to collaborate). Organizational support can also be in terms of culture. Cattonar et. al.(2007) tested this and found that the intensity of interactions (as measured by proximity and number) was positively correlated with the importance of socialization at the school level. Even more applicable to the present paper is their finding that the importance of socialization was positively correlated with the number of hours per week communication occurred and the value of that collective action. While this research is a promising first step, it only cuts the surface of the ways in which to surpass the complicated system of a school. The current study seeks to build on their work and

look at not only formal organizational support of collaboration (meeting rooms and scheduled time) but also the informal ways in which schools can work to facilitate communication among teachers through the layout of the building, visibility and proximity among teachers, and the organization's providing opportunity for shared time.

A key factor unmentioned until now which overrides the extent or success of organizational support are the unions to which the teachers' belong. The participating school district in this study has its own teachers union through the National Education Association. Under this union, all teachers are a part of a collective bargaining agreement outlining the terms of their work. Within this agreement, there are strict requirements in terms of the length of school day, lunch period, and preparation times. However, the contract does not go into any specific detail regarding what can/should be done during these periods. This is where the potential conflict can arise when collaboration becomes a requirement.

An Interactional Model of Schools

While the organization and layout of schools are key drivers of collaboration, they cannot be analyzed without also considering the entire system of a school. Owens & Valesky (2011) created an organizational model of schools, being the first to focus a truly interactional lens on the study of schools. Their "school climate model" describes four key aspects of a school's organization climate: ecology, milieu, organization, and culture. These four aspects are inseparable in shaping the behavior of the teachers and students within a school and coalesce to create a school's "organizational climate".

Ecology consists of the physical and material factors in a school and can be divided into *building and facilities* and *technology*. Within *building and facilities* is the physical design and layout of a school, the unit of analysis in this specific study.

Milieu encompasses the social dimension of a school including both overt characteristics, such as skills, salary levels, demographics, status, as well as less tangible characteristics such as morale, motivation, and feelings of the teachers and the students.

The organizational aspect refers to the administrative and structural design of the school as an organization. This includes where decision making power lies, work group structure, hierarchy, and instructional methods.

Finally, the culture of the school is perhaps the hardest to define as it encompasses the values, norms, beliefs, patterns, and rituals, among others, that are passed down and create the psychosocial segment of a school's processes and ongoing.

In addition to their thorough explanations of how a school works, Owens & Valesky (2011) provide the only school model which incorporates person-environment interaction. This simple equation: $B = f(p \cdot e)$ demonstrates that behavior is a result of a person's characteristics (p) and the characteristics of his or her environment (e). In the school climate model, the person component is grouped into the milieu of the school. However, it is difficult to influence the personalities of the teachers and

students and focus in regards to change is shifted instead towards the environment, a broad category influenced by the ecology, the organization, and the culture of the school.

Despite the major strides the school climate model makes for educational research, it cannot by design go into depth on any of its four climate factors. The current study will attempt to analyze the impact ecology has on the informal communication patterns of teachers, zoning in on the school's physical layout and keeping the school's organization, culture, and milieu in mind as contributing factors.

Method

Sample and School Selection

The current study was conducted with full approval from Cornell University's Institutional Review Board for Human Participants in research. Two K-5th grade elementary schools, here named School A and School C, were selected in the fall of 2011 via a convenience sample through connections with the architecture firm working with the district. All teachers and students moved to two new elementary school facilities, School B and School D, respectively, in the fall of 2012. Three years prior to this study, School C was divided into two different buildings, School C₁ and School C₂ but remained organized under the same principal and operated as one unit. Teachers and students from these two schools were recombined at School D. Both School A and School C (the "before" schools) have traditional, double loaded corridor designs while School B and School D (the "after" schools) have a "learning commons" design. After first gaining permission from the school district and principals of the two elementary schools, all teachers from both schools were eligible

to participate. Recruitment emails were sent out individually requesting participation in the study. This occurred both in the spring of 2012 and the spring of 2013. Thirty-six teachers from School A, 33 from School C, 33 from School B, and 39 from School D were eligible to participate. See the chart below for the number of participants in each part of the study.

Table 1: *Participant Distribution*

	Spring 2012			Spring 2013	
	School A	School C		School B	School D
		C ₁	C ₂		
Collaboration Scale	9	6	1	7	7
Communication Log	9 (70)*	2 (13)*	3 (41)*	6 (57)*	3 (32)*

*number of individual participants (number of instances of communication)

Design

The purpose of this research is to compare the communication and collaboration patterns of teachers in the “before” schools with communication patterns in the new facilities. This is done through a pre-post case study research design with two separate school pairings. The independent variable for each was the spatial design of the schools. The dependent variables were instances and location of communication as measured by a communication log, scores on a teacher collaboration scale, amounts of communication as determined through observations, and qualitative opinion of communication experiences and space as determined through focus groups and interviews.

Measures

Teacher collaboration scale (TCS). The Teacher Collaboration Scale (TCS) was created for the purpose of this study to measure the satisfaction with the collaborative environment of the school. It is partially adapted from Hua's (2010) "Workplace Collaborative Environment Questionnaire." This scale was used as a basis due to its alignment with the goals of this study but in a different context, the office workplace. This original scale is found in Appendix B. Through the use of a literature review and focus group of five middle school teachers from a school district in Texas (identified via a convenience sample), the scale was adapted to fit the context of a K-5 schools and additional items were created to reflect the sub-constructs of Collaboration Work Experience (a teacher's personal collaborative experience), Perceived Collaboration Effectiveness (the perception of teacher collaboration at the school in general), Organizational & Physical Support (the perception of the level of collaborative support given by the school design and organization), and General Satisfaction (the general satisfaction with both the level of teacher collaboration and collaborative spaces/tools provided).

The following are examples of items for each sub-construct in the scale. An item from the scale pertaining to Collaboration Work Experience is: 'I feel well-informed of important information at my school.' An item from the scale pertaining to Perceived Collaboration Effectiveness is 'Teachers at my school work together in a well-coordinated fashion.' An item from the scale pertaining to Organizational & Physical Support is: 'The teachers' lounge/break rooms at my school are spaces for

relaxation.’ An item from the scale pertaining to General Satisfaction is: ‘I am satisfied with my school’s availability of *suitable* spaces for collaboration needs.

The final version of the TCS contains 36 items in a seven point Likert scale, nine for each of the four sub-constructs. Each set of nine contains eight positive statements and one negative statement (reversed coded for analysis). Reliability of the scale was calculated using the scores of study participants and had a Cronbach alpha of 0.825. However, General Satisfaction was the only subconstruct found reliable ($\alpha = 0.844$) and analyzed separately. The other three subconstructs were not found to be reliable.

Communication log. The Communication Log measure was used to create a “map” of the communication that occurs at the two schools and measures the informal communication component of this study. Twice a day for two weeks, both in the spring of 2012 at the “before” schools and the spring of 2013 at the “after” schools, participating teachers were asked to log their communication patterns using an online survey tool. They received email prompts at the beginning of the school day and during their lunch hour to fill out the log. The log allowed for multiple instances of communication and for each asked with which teachers the respondent communicated (by selecting their name(s) from a list), the length and time of the communication, the location of the communication (by selecting a location from a given map), the topic of the communication, and whether or not the respondent initiated the communication and if so, were his or her goals met. The purpose of the latter three questions was to decipher any potential organizational factors in communication patterns that could conflict with spatial factors. Also asked was whether or not the communication was

scheduled, the operationalization of formal versus informal communication. The Communication Log is found in Appendix C.

Space syntax. Space Syntax was used to objectively analyze the spatial layouts of the “before” and “after” schools. Axial maps of the “before” and “after” schools were completed in order to show the connectivity of the space. The maps are created by identifying the longest straight line that can be drawn through a space and into those adjoining. This is done for every space and permeable threshold on the floor plan resulting in a map of intersecting straight lines. The number of times a line is intersected by another represents the *connectivity* of the space in which the line crosses. Spaces of high connectivity are in theory more accessible and thus, are predicted to have higher levels of activity (e.g., people walking through). Connectivity is shown visually on axial maps with colored lines in a spectrum from blue to red indicating low to high connectivity, respectively.

Visibility relationships were also analyzed for each floor plan. This looks at the depth of locations (i.e., visual steps one must take to get there) compared to all other locations. This is also called the *integration* of the space. Similar to spaces with high *connectivity*, well integrated spaces have shallower depth meaning you take fewer turns in order to reach them and thus, should more frequently find yourself interacting with and in that area. Integration is shown visually on floor plans with areas colored in a spectrum from blue to red indicating low to high integration, respectively.

A large limitation of space syntax is its inability to analyze multiple floors or levels of space. Being that most of the schools in this study are two floors, each floor is analyzed separately and the interactions between the two remain unobserved but

anecdotal. Theoretical evidence is included to discuss how the different floors impact the movement through the space and teacher communication.

Observations. Observations were completed in both of the new schools. Due to scheduling constraints, it was not possible to observe communication in the “before” schools. The purpose of the observational component was to add an empirical element to the communication logs and extend the unit of analysis from the teachers to the spatial design itself. The resulting areas of high connectivity found in the aforementioned spatial analysis were used as the basis for defining locations for observations. All “public” spaces (i.e., not within a teacher’s own classroom or other private areas) were observed. A total of six spaces were observed, three at each school. The observation took place for 2 hours in each location with 1 hour occurring in the morning and 1 hour occurring in the afternoon. One exception to this was the observation of the second floor of School D in which visibility and time issues required observation of two spaces during one hour-long period. During these times, the observer completed behavior maps of the space, indicating the location, time, and number participating in all instances of informal communication

Focus groups/interviews. In order to help validate the results of the communication log and the TCS, focus groups and some individual interviews were held after each round of data collection. Principals were also interviewed to get an understanding of their specific goals for the school and interpretation of teacher communication. Due to school scheduling, the focus group for School A was postponed until the fall of 2012 when the teachers had already moved in to the new schools. No focus group was held for the teachers from School C due to scheduling

issues. During this time, the new school was discussed and the focus groups and interviews concentrated on the communication patterns at the before schools. In the spring of 2013, a focus group was held at School B and interviews conducted at School D to discuss the communication patterns at the new schools.

At School A, all teachers were eligible to participate in focus groups during the lunch hour in the teacher break room. The focus groups were informal as teachers were entering and leaving at different times for their individual lunches. Floor plans of School A were placed around the table to help prompt discussion of its spatial layout and identify key areas of communication. The main topic of the focus group was where communication occurred at School A and the drivers of location choice (e.g., teacher location, privacy, etc.). The focus group was recorded and transcribed by the researcher. Teachers who were not able to participate in the focus group could opt for individual interviews. Three teachers were interviewed about School A and two teachers were interviewed about School C.

Focus groups at School B occurred in a more formal fashion at the end of the school day. Again, floor plans of the schools were given to prompt discussion and teachers asked to annotate their thoughts on the floor plans directly. Three teachers participated in this focus group. Two teachers from School D were interviewed. Transcripts of the focus groups and interview are in Appendix G.

Analysis

Due to the pre- post nature of the study as well as having two different groups of schools, the four schools were organized into two different labels: Design and School Pair. Design refers to schools having either a traditional design (T; the

“before” schools, School A and School C) or a learning commons design (LC; the “after” schools, School B and School D). However, it is also necessary to account for the fact that the same teachers and students moved from one “before” school to one “after” school. In other words, teachers from School A all moved to School B and teachers from School C all moved to School D. Thus, the schools are also divided according to School Pair, symbolized by $A \rightarrow B$ and $C \rightarrow D$.

Teacher collaboration scale (TCS). A factor analysis was completed on the teacher collaboration scale. One factor that made theoretical sense emerged, measuring the satisfaction of collaboration support in terms of physical space and organizational culture (20 items; $\alpha = .927$; Table 2). The loaded items had high overlap with the original subscale of *General Satisfaction* but had even higher reliability and were analyzed instead. The following items are the ones which loaded onto the new subscale, *Collaborative Support Satisfaction*.

Table 2: *Collaborative Support Satisfaction Subscale*

Original Item #	Item	Factor Loading
4.1	There is a space for teachers to spend time outside of their classrooms at my school.	.734
4.3	The teachers' lounge/break room is easily accessible from my classroom.	.610
5.1	There are adequate types of collaborative spaces at my school.	.905
5.2	I am satisfied with my school's availability of spaces for collaboration needs.	.761
5.3	I am satisfied with my school's availability of suitable spaces for collaboration needs.	.887
5.4	There is a good variety of collaborative spaces at my school.	.903
5.5	I am satisfied with the arrangement and furnishing of the teachers' lounge/break room at my school.	.767
5.6	I am satisfied with my school's collaboration environment in general.	.674
5.7	I am satisfied with my school's communication tools and technology.	.615
5.9	I cannot always find a space to carry out collaborative work when I need it.	.796

T-tests and Univariate ANOVAs were used to analyze the subscale and the scale as a whole. Data was analyzed for both Design and School Pairs so that changes and interactions can be seen across both levels.

Communication log. The generalized estimating equation regression model was used to analyze the communication log in order to compare trends across the individual teachers' responses. This method was chosen since responses are not independent as the same teachers completed the log multiple times. The main interest of the log was to evaluate the prevalence and drivers behind informal communication. The item asking if the communication was scheduled or nonscheduled served as the distinguisher between informal and formal instances of communication and was the main subject variable of the analysis. The generalized linear model was run for all items in order to identify which had a significant impact on the odds ratio of scheduled versus unscheduled meetings. In order to run the model for location of communication, the locations logged by teachers were divided into the following categories: Classrooms/Teacher Offices, Project/Breakout Space, Hallways, Administration Office, Teachers' Room, and "Specials" Rooms (i.e., music, art, and gym).

Space syntax. The program, UCL Depthmap 10 was used to perform the space syntax analysis on AutoCAD floor plans of the schools. All 5 of the study schools' buildings were analyzed. While numerical comparisons are possible with space syntax software, their use goes beyond the scope of this study and I instead use visual analysis of the maps to determine the general measures of integration and

connectivity. Results from the visual integration and axial maps were compared across School Pairs and Design. The predictions these analyses give were compared with the data from observations and the location data from the communication logs. The data collected in both of these methods were not sufficient to allow for numerical correlations to be derived but were satisfactory in determining if the spatial designs' intent matched their actual use and provide a basis for further space syntax exploration.

Observations. The analysis of the observation data was done at a high, thematic level as the number of instances and data recorded are not powerful enough for quantitative analysis. In addition to the number of times school employees talked with one another, the observations measured the amount of traffic in particular areas. High traffic levels create more potential for run-ins with others teachers, which, as mentioned in the literature review, can lead to more informal communication. In the analysis, this assumption will be compared with the scores of the TCS. Specifically, the number and nature of the communications observed will be compared between the two schools with learning commons designs (School B and School D). The observed communication will also be compared to the space syntax analysis to identify if the general trends identified in each are the same.

Focus groups/interviews. All interviews and focus groups were transcribed verbatim and then coded using Atlas.ti. Interview and focus group data from each school pair were analyzed separately but due to the inability to isolate the “after” schools from the “before” schools in the interviews they were grouped together and overall themes in the design and *transition* from the “before” to the “after” school

designs became the unit of analysis. An initial list of codes was created which were then grouped together into broader categories. These themes were further combined to create the three overall themes on which the analysis focuses.

Results

Teacher Collaboration Scale (TCS)

Total collaboration score. An independent samples T-test found a main effect of design on *Total Collaboration Score*, $t(28)=-2.75$, $p=.01$ (Table 3). Specifically, schools with a learning commons design (LC; $M = 5.21$, $SD = .169$) scored higher than those with a traditional design (T; $M = 4.62$, $SD = .138$).

Table 3: *Mean Total Collaboration Scores as a Function of Design*

Design	Mean
T (N=16)	4.62 (.138)
LC (N=14)	5.21 (.169)

Note – Standard deviations are in parentheses.

A Univariate ANOVA was completed to analyze the *Total Collaboration Score* as a function of both school pair and design. As anticipated, there was no main effect for school pair. However, there was a significant effect for design, $F(1,26) = 8.65$, $p = .007$ and an interaction between school pair and design was found, $F(1,26) = 4.21$, $p = .05$ (Figure 1). Specifically, there was no significant change in *Total Collaboration Score* during the move from School A to School B ($A \rightarrow B$); however, the total collaboration score increased during the move from School C ($M = 4.46$, $SD = .214$) to School D ($C \rightarrow D$; $M = 5.49$, $SD = .214$).

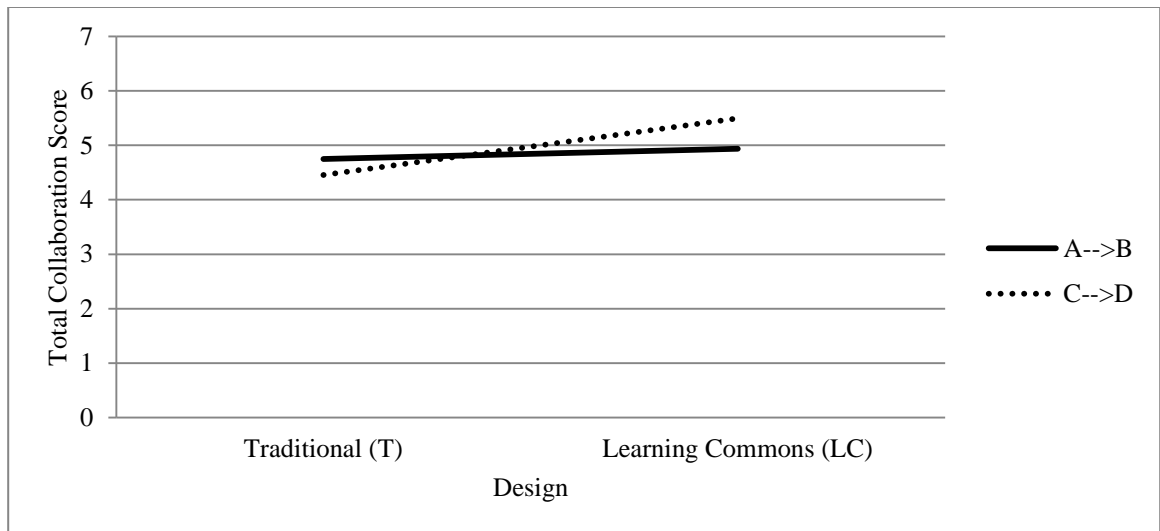


Figure 1: *Change in Total Collaboration Score as a Function of School Pair and Design*

Collaboration support satisfaction. An independent samples T-test found a main effect of design on *Collaborative Support Satisfaction*. Specifically, schools with a learning commons design ($M = 5.22$, $SD = .255$) scored higher than those with a traditional design ($M = 3.30$, $SD = .240$) on the subscale.

A Univariate ANOVA was completed to analyze the mean scores of *Collaborative Support Satisfaction* as a function of both school pair and design (Table 4). There was a significant effect for design, $F(1,26) = 30.07$, $p = .000$ and an interaction between school pair and design, $F(1,26) = 7.86$, $p = .009$ (Table 5, Figure 2). There was no significant main effect for school pair. Specifically, there was no difference between the changes that occurred after the move from School A to School B and the move from School C to School D and both moved in a positive direction.

Table 4: *Univariate ANOVA of Collaborative Support Satisfaction*

	<i>df</i>	<i>F</i>	<i>Sig.</i>
Main Effect of A→B	(1,26)	3.82	.062
Main Effect of C→D	(1,26)	32.42	.000
Interaction of School Pair and Design	(1,26)	7.86	.009

Table 5: *Mean Scores of Collaborative Support Satisfaction as a Function of School Pair and Design*

School Pair	Design	Mean
A→B (N=16)	T	3.63 (.318)
	LC	4.57 (.360)
C→D (N=14)	T	2.97 (.360)
	LC	5.87 (.360)

Note – Standard deviations are in parentheses.

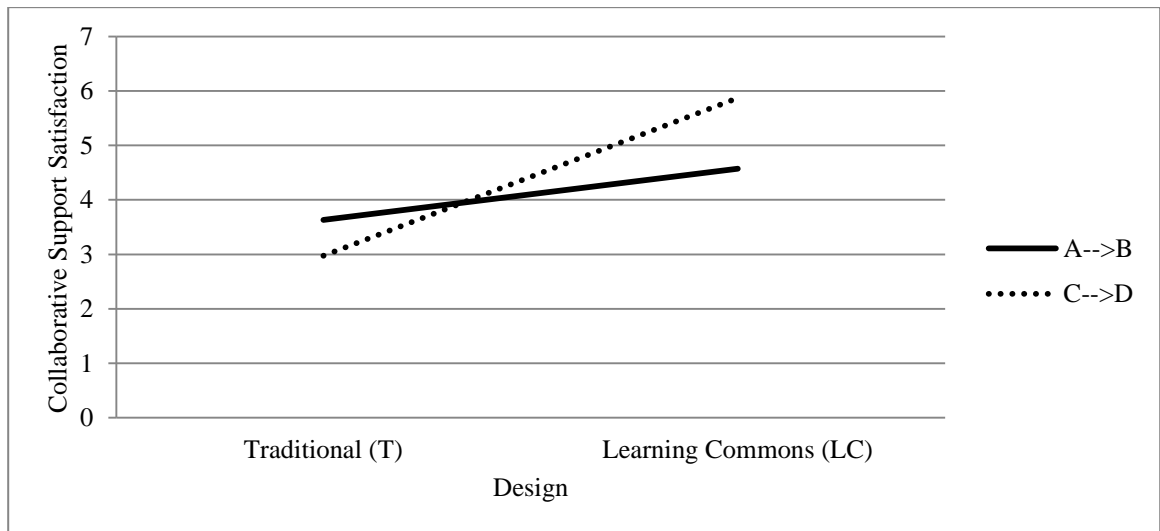


Figure 2: *Graph of Collaborative Support Satisfaction as a Function of School Pair and Design*

Communication Log

While no significant effect of school pair and design on informal communication was found, further analyses of other variables indicated the following potential drivers for informal communication: topic of communication, number of teachers communicating (i.e., size of group), time of day, length of conversation, and location of communication. All analyses controlled for teacher respondent subject effect (N=15).

Teacher communications were grouped into two categories: student issues (e.g., motivation, behavior) and teacher coordination (e.g., arranging schedules, team teaching). The odds of an unscheduled, informal meeting go up by 16% (Exp (B) = .162 located in the interval from .04 to .667, $p=.012$) when discussing student issues as compared to teacher coordination.

Communications were divided into instances communicating with one other teacher and instances communicating with more than one other teacher. The odds of an unscheduled, informal meeting are higher when only communicating with one other teacher (Exp (B) = 3.413 located in the interval from 1.032 to 11.288, $p=.044$).

The time of day was correlated with the odds of unscheduled meetings. Specifically, the odds of unscheduled meetings go down throughout the course of the day with scheduled meetings becoming more prominent (Exp (B)=.594 located in the interval .477 to .739, $p=.000$).

The length of conversation was correlated with the odds of unscheduled meetings. Specifically, the odds of unscheduled meetings go down as the length of conversations are longer (Exp (B)=.288 located in the interval .164 to .507, $p=.000$).

The location of the communication was partially correlated with the odds of unscheduled meetings. The only space type that impacted the odds of scheduled vs. unscheduled communication was Project/Breakout Space. However, this is in the opposite direction than anticipated and the odds of unscheduled communication is less in these locations (Exp (B)=.135 located in the interval .055 to .331, $p=.000$). Sample size may be an issue as only 5 of the 178 cases were logged in this location.

Maps of communication. The locations of each instance of communication were plotted onto the floor plans and color coded by teacher in order to identify any patterns within each respondent. Some teachers filled out the log at the “before” school as well as the “after” school. Their teacher number and dot coloring are the same on the respective maps allowing for comparisons of their specific changes. The maps of the communication log data are in Appendix D.

Results by school pair.

A → B. Six teachers from both School A and School B provided location information. Three of these teachers were the same at both School A and School B (Teachers 1, 2, and 3). In School A, most communication occurred in hallway “L” and in the teachers’ room while communication occurred more inside of classrooms when at School B. At both School A and School B, Teachers 1 and 2 communicated in a variety of places throughout the school, especially in the teachers’ room. Teacher 3 communicated within a smaller area and did not log communication inside the teachers’ room.

C → D. Three teachers from School C₁, two teachers from School C₂, and three teachers from School D provided location information. Most of these teachers only

chose to participate during one of the two rounds of data collection. However, one teacher did participate at both School C and School D (Teacher 10). Due to the limited data, Teacher 10 will serve as the main comparison at this level. At School C, Teacher 10 communicated evenly across all three levels. Teacher 10's classroom spaces were located on both floor 1 and floor 3 of School C₂ which could account for this movement. When at School D, Teacher 10's logged communications were only on the first floor, often in or near the classroom or the room of another teacher.

Other results. Other differences between schools that do not fall into the school pair analysis were also found. For example, teachers at School D only logged communication on their own floor whereas teachers at School B would log communication on both. Also, teachers at School B logged many communications in the teachers' room whereas teachers at School D logged communication in or near their classrooms, with none being logged in teachers' rooms.

Space Syntax

The results from the space syntax analysis are found in Appendix E.

School A. The visual integration of School A indicates only one location in the school in which visibility is high – the intersection between the two main corridors. The connectivity is highest in the hallways, with the main hallway on which the entrance is off of having the highest.

School B. School B's visual integration on the first floor is very similar to what the teachers' experiences at School A – the visibility is highest at the intersection of the two main corridors. However, the second floor has higher levels of visible integration throughout its circulation space, indicating that teachers should be able to

see one another more easily while in the hallway. The connectivity measure correlates with this, with higher connectivity being found in the corridors, especially on the second floor.

School C₁. One caveat to the pre and post case study design of this current analysis is the fact that School C is divided into two buildings. However, from a spatial design point of view, their designs are very similar and data can therefore be combined and compared to School D more smoothly. Of all of the floors of School C₁, the main floor has the highest levels of connectivity, indicating teachers should have more opportunities to interact with one another. The next highest level of connectivity is on the bottom floor. The highest levels of visual integration however can be found in the “off gym” floor. This makes logical sense as the gymnasium is a large open room and will thus have high levels of visibility. While there is slightly higher integration found in the hallways, overall the visual integration measure is relatively equal throughout the building.

School C₂. Similar to School C₁, the highest levels of visual integration are found on the 2nd floor where the gymnasium is. Overall, visual integration is highest in the hallway portion of the floors and all of the classrooms measure roughly the same with their lower values of integration. Connectivity is highest on the basement level and on the 2nd floor.

School D. Of the five facilities, School D has more areas of high visual integration. Specifically, nearly all of the circulation areas on the first floor area are visible to one another with the second floor being only slightly less integrated. Connectivity is highest in the hallways that connect the gym and kindergarten wings to

the learning commons area rather than the learning commons area itself which theoretically would be the desired location to have the highest levels of connectivity.

Observations

Maps of observation locations are found in Appendix F.

School B. Two locations were observed on the first floor, the administration/cafeteria wing and first floor project space. The second floor hallway was a small enough area to see the majority of the circulation space from one spot. The administration/cafeteria wing differed greatly from the morning to mid-day. The space was observed as teachers and students were arriving as well as teachers taking their students from the playground to their classrooms. It appeared as though teachers entered using multiple entrances but those whose paths crossed all greeted one another. In the early afternoon, during lunch time, the space had less frequent instances of communication but the ones that did occur were longer and contained more meaning than the passing greetings of the morning. For example, one teacher passed by another stating “how are you? I haven’t seen you all week!”

The first floor project space consisted of frequent greetings in the morning. The majority of the conversations occurred while one teacher used the printer, copier, or sinks. Communicating teachers would discuss their weekends while waiting in line to use the copier or would be seen waiting by a passing teacher and exchange a brief hello. While this communication around service areas continued during the afternoon observation, the areas were used less frequently. There was one teachers’ aide who works permanently within one of the project spaces and frequently communicated with anyone walking through the hallways. A notable moment in the afternoon

occurred when teachers brought in their classes from outside. While their students changed out of their winter coats and boots at their lockers the teachers engaged in meaningful conversations, both personal and related to their classes.

The second floor in both the morning and afternoon had much less activity than the downstairs locations. The first time frame of observation occurred when teachers and students were at their “specials” (i.e., art, music, or gym) instead of in the classroom. However, when classes were present in the afternoon, communication was still infrequent. One class did use the space for a group project and the teacher monitoring the class moved from inside of her classroom to the breakout space to the project area in order to work with the different groups of students. She saw and talked with other teachers twice during the period of observation.

School D. The first floor was observed both in the morning as teachers were arriving as well as in the afternoon. The observation took place past the threshold of the entrance area. Many teachers used the stairs right by the entrance and never had to enter the project circulation area. Many teachers greeted one another in passing at the beginning of the observation but once classes began, nearly all of the communication occurred around the use of the copy machine. There was distinctly less communication in the afternoon. The two instances that did occur happened when a teacher was heading to the printer or to use one of the breakout rooms.

The second floor project area was not very frequented by teachers in both the morning and the afternoon. Teachers did not pass through the space very frequently because they would use the stairwells at the ends of the hallways. Communication did

occur whenever teachers were supervising students at their lockers. In the afternoon, the only communication that occurred was when teachers were lining up their students in the hallways. There were two occasions in which teachers passed one another but did not acknowledge one another. All other occasions of seeing other teachers in all locations observed in this study resulted in at least a greeting.

Focus Groups/Interviews

Codes were organized into two levels of themes based on frequency, cross over, and overlap. Table 6 displays the encoded themes and their frequency.

Table 6: *Interview and Focus Group Themes*

First Level Themes	Second Level Themes
Culture of Collaboration	Awareness of Other Teachers Importance of Culture
Drivers of Communication	Impact of Proximity/Location The Draw of Amenities Impact of Schedule
Space Use and Adaptation	Adaptation of Space Design Intent versus Reality

Culture of collaboration. This theme was most common throughout the schools and relates to the overall culture of the school in regards to collaboration. This category can also be divided in to the relationships that both formal collaboration and informal communication have with the culture of the school. When discussing collaboration in general, teachers first mention formal meetings and initiatives. However, they were aware of the nature of the study (in regards to its focus on informal communications) and thus began to focus their discussions towards this side

of the collaboration spectrum. Second level themes look into the frequency teachers see other teachers, the underlying factors impacting such frequency, the importance of culture as both an antecedent and a consequence of communication, and the consequences of communication or lack thereof.

Drivers of communication. The second theme looks into the various moderators impacting the ability for teachers to communicate with one another. Various second level themes include the impact proximity and specific locations within the school have on communication, the impact that amenities (e.g. copy machines, sinks) have on affording for communication, and the impact of the schedule of the day and the amount teachers are able to communicate.

Space use and adaptation. This theme relates to actual use of space driven by the teachers and organization of the school. The second level themes embedded within this involve the adaptation of space by teachers to aid unmet needs or account for unintended consequences of the design and the differences between what was intended in the design versus what actually occurred. These two second level themes are intertwined as the adaptations teachers make can result in a design not being used as intended. Other drivers of adaptation are the visual barriers or aids of communication and the acoustics of the designs and their implications, both positive and negative.

Discussion

The goal of this study was to explore the impact that a school's physical design has on the informal communication patterns of teachers along with any mediating and moderating variables. Through a pre- post case study of two different schools, a mixed

methods approach was used to identify which physical and organizational properties affected teachers' informal communication patterns throughout the school day. The schools participating in this study were specifically designed by the architect with the intent to increase the collaborative environment of the school. Thus, it is hypothesized that the learning commons designs would have a positive impact on the amount of communication that occurred between teachers. Specifically, it was anticipated that TCS scores would be higher at the “after” schools when compared to the “before” schools. The communication log and other methods of data collection were implemented in order to explore any mediators and moderators of the increase in collaboration score.

The following discussion begins with a summary of the results within each of the methods used in each of the schools. I will then discuss the overall trends of these findings in regards to spatial and organizational prerequisites to collaboration and the implication this can have on future school design. The discussion will end with limitations and future directions of study.

Summary of Findings

Teacher collaboration scale. The hypothesis was partially supported in that the total collaboration score did increase as a function of Design. However, there was an interaction between Design and School Pair with the total collaboration score only increasing after the move from School C to School D ($C \rightarrow D$). A confounding variable that may contribute to this interaction is that School C and School D were run by different principals. School C had many formal collaborative initiatives set up

including collaboration days, formal team teaching under a facilitator, and regular meetings. These formal initiatives were not yet reinitiated by the principal at School D at the time of this study. Thus, if principal change were a strong contributor to the findings, the collaboration score was expected to go down at School D. However, as the score actually increased, the interaction is more complicated and there is a need to look further at design differences between the two learning commons designs as well as potential organizational differences between the two that would moderate the change. There is also potential for the differences in the “before” school designs to impact the adaptation to and use of the new facilities. These potential explanations will be explored through the other methods discussed here.

Both of the School Pairs saw significant increases in their scores of *Collaborative Support Satisfaction* after moving from the “before” to the “after” schools. This scale focuses heavily on the physical support of collaboration and thus, supports the hypothesis that Design has the potential to impact collaboration and informal communication. Similar to the overall *Total Collaboration Score*, there was an interaction between design and school pair and the move from C→D saw a larger increase in *Collaborative Support Satisfaction* than A→B. Again, this points to the presence of moderators that will be explored through the communication log and other method discussions to follow.

Communication log. While there was no significant effect of Design or School Pair on the amount of scheduled versus unscheduled meetings, other variables appeared that impacted the frequency of informal communication. Time of day had an influence on informal communication as their frequency relative to scheduled

meetings decreased throughout the day. This could indicate that most of the informal communication focuses around greeting other teachers, something that most naturally occurs upon arriving in the morning, or that the formal communication simply increases later in the day as more meetings are scheduled after school. It is also easier to run into one other teacher for an impromptu conversation versus running into multiple other teachers at once. Thus, the finding that scheduled meetings increased with the number of teachers involved was expected. The spatial implications these findings could have is that the use of space could also change throughout the day. This is something administration can take into account when scheduling spaces, especially those meant for impromptu use. For examples, perhaps informal communication decreases throughout the day because spaces are scheduled more in the afternoon. Altering this scheduling then could impact the frequency of informal communication.

The length of conversation also correlated with the formality level of the communication. Specifically, longer meetings were typically scheduled whereas quick meetings were typically unscheduled. This is an intuitive finding as an informal communication such as a greeting or quick check-in will take less time than a more substantial conversation. Conversations regarding teacher coordination issues were often scheduled whereas those involving student issues were unscheduled and thus, more informal. This indicates that teachers are more likely to approach other teachers informally throughout the day to discuss any current student issues at hand as they are more time-constrained as well as unplanned needs. Teacher coordination on the other hand can be easily planned for and a more routine conversation for teachers to have.

While the locations of communication are impacted by the specific locations of participating teachers, controlling for this did still show some trends in the data.

Project/Breakout Spaces were designed to be used by entire classes or small groups for collaborative work. A side benefit of their use would be getting teachers and students out of the classroom and more visible to others. This visibility would then hopefully lead to an increase in communication among teachers. However, according the communication log data, these spaces are associated more with planned meetings with other teachers rather than the informal ones the architects anticipated they would support. This leads to potential organizational factors impacting their use, such as the spaces being reserved or simply underused. This point will be discussed further in this discussion.

Maps of communication. The overall patterns of communication logged where as expected per previous literature. Proximity to others is known to be a driver of communication (Sailer & McCulloh, 2012) and the logged communication patterns trended around the areas in which the teachers' taught. The proximity effect is typically even more salient across floors as distance is further increased. However this seems to be surpassed by some of the study schools. School D did not have any cross-over between floors whereas the other multi-story buildings had movement between the floors. This is most likely do to other drivers of movement. For example, at School B, Teacher 1 logged the most communication on the second floor close in classrooms or the Teachers' rooms. However, Teacher 1 also logged communications on the first floor near the office, a location a teacher is often required to visit. Similarly, at School B, all "specials" are located on the first floor and create a need for all teachers to travel

on the first floor. Thus, it can be deduced that teachers whose classrooms are on the second floor will have reason to move and interact on both floors while teachers whose classrooms are already on the first floor near other required spaces will tend not to travel to the second floor. Exceptions to this are of course seen depending on a specific teacher's job description and needs in regards to movement throughout the building. Basically, if the desired result is for teachers to move around the school and be more visible, you must design places for them to go.

School C₂ seemed to defy this assumption as Teacher 10 communicated fairly evenly across floors. However, this teachers' classroom space was divided between the first and third floor, again creating a situation in which the teacher had to travel and thus, had more opportunities to pass by and communicate with other teachers.

There were notable differences between locations of communication between traditional and learning commons designs. Communications tended to take place in hallways at School A with its traditional design but more inside classrooms at both School B and D with a learning commons. School C did not have enough variety of teachers log data to draw any conclusions regarding classroom versus hallway communication. The findings are counterintuitive as the hallways at the School A were discussed by the principal as being too small for communication and a large driver of the design of Schools B and D was larger circulation space in order to afford for increased communication. This correlates with the finding that project/breakout space use correlates less with unscheduled meetings than other spaces. This can be due to the fact that the spaces themselves are underutilized as teachers are still becoming accustomed to the space.

Logged communication in teachers' rooms varied between the two school pairs and teachers in C→D did not log many instances in this room. Many drivers behind this difference became apparent in the focus groups and interviews and will be discussed later in that section. However, one similarity that helps validate the data logged is that Teachers 1 and 2 both logged many instances of communication in the teachers room while at School A and at School B. This shows that their behavior was consistent at each school in regards to the spaces that would be sought regardless of location. In other words, there are affordances and amenities within the teachers' room (e.g. copiers, tables, socialization, etc.) that drive the space use more than its physical location or proximity. This validates the assumption that multiple factors influence space use and communication patterns and thus supports the systems view of a school underlying this study.

Space syntax. Since there is limited communication log data and no observation data for School C, little can be done in regards to interpreting both building's integration and connectivity measures. One thing that can be noted is that Teacher 10, who completed the log for School C₂ logged the most instances of communication on the 2nd floor in the area that has both the highest levels of integration as well as the highest levels of connectivity. This signifies that space syntax can be an accurate predictor for communication.

School A, while having no observation data, did have good response on the communication log as well as was discussed in some of the focus groups and interviews. The majority of the communication logged was in hallway "L." While this hallway does not have the highest levels of connectivity or integration of the two main

corridors, it was the hallway off of which the responding teachers' classrooms were located. The fact that the majority of the communications took place in the hallways in general is itself a telling finding. The principal of School A stated that hallways were not conducive to communication as they were narrow and felt as if a "highway." However, the logged data speaks otherwise and this could potentially be due to the hallways having higher level of integration and connectivity than the classrooms. In other words, when traveling through the school, the hallways are where teachers are more likely to see and run into other teachers, thus creating an opportunity for communication. The teachers validated this in their focus groups and also spoke of the hallways being a main location for communication.

School B's logged communication took place mainly within teachers' classrooms and the teachers' room with some occurring in project areas. A beneficial role space syntax can play for both of the schools with a learning commons is addressing the issue of isolation. This was a common theme brought up in the focus groups and interviews in that some teachers, depending on their specific location, felt very isolated in School B. When one looks at the visual integration map, some classrooms are much darker blue than others, indicating potential for higher feelings of isolation. On the second floor of the building, the classrooms that are directly off of the main corridor have higher levels of visual integration than those off of the perpendicular hallways. While observing the space, it was much easier to see other teachers from this main hallway and the teachers in these rooms along it have better access to both the project spaces as well as quick communication opportunities.

Some teachers specifically discussed the fact that the classrooms were not directly off of the hallway but instead have small foyers clustering two classrooms around a breakout room. The teachers felt that this made it more difficult to communicate with those in the hallway. This phenomenon was not apparent during observations but does correlate with the space syntax analysis. Specifically, the extra foyer creates an additional level of depth one needs to cross through in order to reach a space. The new door position also alters the connectivity measure as the axial lines do not extend as much into nor cross others as frequently as they would if the doors were directly off of the hallways.

School D had the highest quantity of areas with high visual integration, with the first floor scoring slightly higher than the second floor. This was corroborated in the observations as more instances of communication were observed on the first floor. The second floor consists of glass enclosures providing visibility to areas on the first floor. An unintended consequence of this is less visibility and connectivity throughout the second floor itself. However, the area of highest integration on the second floor was the spot in which most communication was observed during observations, again verifying the validity of the space syntax analysis.

School D has much more variability of potential isolation in its classroom, with some having high potential for isolation (dark blue) versus much lower potential (yellow to green). The difference in isolation between certain areas was noted in the interviews as one teacher who was in a classroom with higher integration and thus, low isolation, was happy with her location and visibility but discussed teachers at the other ends of the building who complained of never seeing other teachers and being

unable to engage in any spontaneous instances of communication. This variability makes placing teachers close to who they need to communicate with specifically even more important. Optimally, space syntax analysis would be completed before schools are constructed in order to make the potential for isolation more even and as low as possible for all classrooms.

Observations. The observations of the “after” schools revealed much insight into the use of space that was not accessible from the other methods of data collection. Several trends were apparent throughout both schools. One of the most salient was service spaces as affordances for communication. In both schools, informal communication oftentimes occurred when a teacher is using the copy machine or printer. These service areas are effectively acting as the stereotypical “water cooler” that exists in office spaces. However, in addition to just chatting in line if both teachers need access to the copier or printer, they were also located in the learning commons/circulation areas of the floors. Much communication occurred when just one teacher was using the copy machine and another was simply walking by. This is when the service area affords for communication by creating a reason for the teacher to venture in to a certain area and adds to the concept that if you want teachers to move around the school, you must give them a reason.

Another key observation was related to the teachers’ schedules. A prime opportunity for teachers to see one another is while taking their classes to and from their “specials”. Often, teachers talked while their students were changing into their winter coats outside of their lockers or would simply greet one another while walking their classes past one another. Many factors appeared to impact the frequency of such

interactions, however. In one case, classes were moved down separate stairwells, preventing the teachers from passing one another. When this occurred, the overlapping “specials” time had a null effect on communication. Communication also seemed to decrease throughout the day, which correlates with findings from the communication log. This can be due to teachers’ schedules in the afternoon not allowing for movement through the open areas.

During all of the observation periods from both schools, a project space was only used once when a class worked on a project with various stations. As the design intended, this provided an opportunity for the teacher to be more visible and there were two instances of communication with other passing teachers during this time. At other points in time however, project spaces were often used by just one paraprofessional or Title 1 staff. This was the case because there are no spaces designed specifically for their use. This may create an opportunity for this specific staff to see others and be seen but limits others’ use of the areas.

There were notable differences in the frequency of communication and passing through the hallways between the first and second floors of both schools with little to no communication occurring on the second floors during certain times, especially at School D. This could be due to the “specials” schedules overlapping with the observation periods. However, it should be noted that the upstairs area of School D did not have any service areas whereas School B had printers and more open project areas.

Focus groups/interviews. The interviews and focus group data was coded into three broad themes to be discussed here: culture of collaboration, drivers of

communication, and space use and adaptation. Each of these themes contains second level themes that address more specific trends in teachers' responses.

Culture of collaboration. This theme encompasses the ever-allusive concept of culture and what that means to the teachers and their ability to communicate and their satisfaction with the new facilities in regards to their collaborative support. Surprisingly, many of the teachers at School B demonstrated immense disappointment in the amount of collaborative support they feel at the new school. This finding supports the lack of change in *Total Collaboration Score* on the TCS after the move from School A to School B. Many teachers feel even more isolated than they did while working at School A, regardless of where their new location is in the building.

One teacher summarized these feelings:

“[School B]...has a different feel. It feels like I come here to work, it doesn't have the school community feeling yet...hopefully it will come along but it doesn't feel like that right now... we're all in our little compartments...more than even before...it's just not home.”

The principal was aware of this emotion and stated: “I think that...the staff that would say that they miss [School A] only because that's where their lives were for a long time.” However, the principal did not appear to be aware of that a driver behind this was teachers' feelings of isolation. It was recognized by both the principal and the teachers that the new collaborative spaces are not yet being used to their fullest potential and the principal predicted that they will be used more and more with time and teachers will eventually recognize the value of the new facilities.

Contrasting the experiences at School A and B, a teacher from School D, when referring to the experience at School C stated:

“The atmosphere that was developed was a collaborative atmosphere so it always seemed to work well...I don't think it had anything to do with the space really. I think it had more to do with the people who were in the administrative positions.”

This finding and the differences between School Pairs indicated the potential for training and other organizational interventions to influence culture and the opinion of space.

Teachers at School D had more mixed opinions of the new space in regards to its collaborative support. The case for these teachers is difficult to pin down as all opinions regarding the new school are relative to whether the teacher came from School C₁ or School C₂. Additionally, the two schools combined into one and the teachers are now physically housed with teachers with whom they were not before. One teacher stated that while she sees teachers she never saw before since they were from the other school, she can still go days without even seeing certain teachers due to where they are located in the school.

Evidence was also presented of surpassing physical constraints on communication and making it work regardless. Teachers mentioned that they are in the teachers' room more often since that was the only time in which they were able to talk with certain teachers. Others stated that regardless of location, they would still seek teachers out if they needed them. The willingness to put forth the effort to see

others speaks to a higher inclination to be collaborative, regardless of space. To this point, a teacher at School D stated:

“I’ll seek people out no matter where I am. It’s never...you know, when I was down in the basement (at School C) I still would travel where I needed to, who I need to see”

The importance of a collaborative culture was addressed frequently. One powerful anecdote discussed the culture of a school in the same district at which some of the teachers previously worked. A teacher described this experience as follows:

“... all the teachers got a 15 minute break while the kids ate snack and the paraprofessionals would watch the classrooms and we would go to the cafeteria and we would have coffee and chit chat and that was the most--- --productive--bonding time we’ve ever had. We were such, we were like a family. We...knew about each other’s kids and parents and what’s going on in their lives and we knew about families in the...school that were having trouble and we were, were tight then, we were really, really tight”

This further demonstrates the amount of value that teachers place on the relational aspect of the school. There is now an obvious void due to the lack of time given to the building of relationships with other teachers, something that is currently not a part of typical collaborative initiatives. Also, while this anecdote addresses the value put on the informal collaborative potential of a school, the more formal side of collaboration seems to be lacking as well and teachers discussed a lack of training on how to properly use the new spaces. During the focus group at School B, teachers stated:

“I don't think we've really been taught how to collaborate effectively...there's a lot that's just assumed, like we're supposed to just know how to do it...I feel like when we talk we're bouncing ideas about curriculum but in terms of collaborating and working together and teaching together, we don't, we don't do that”

The quote here is one of the key problems in schools today and may be the most telling declaration in this current study. This statement roots back to the loosely coupled nature of schools in that the administration is often disconnected from the actual happenings of the school. What typically happens is that the administration will deem a new policy or tell teachers to collaborate more, perhaps even give them time to collaborate. However, their involvement often ends there and teachers continue teaching and relating to one another in the same way as always. This being the case, there is a large call for training and more connection between administrative policies and intentions and the teachers themselves. There is not one answer to the current problem at hand and it is again the system which needs altering. Collaboration must not only be scheduled for, it must be designed for both in terms of space and in terms of culture and organization.

In summary, teachers are not as satisfied with the space and culture of the new schools as would be anticipated. However, they do recognize the fact that its use and their comfort within the new space will improve over time. There appears to be a clear need for training on how to collaborate within the new space as well as organizational strides that could be taken to help build up a collaborative community within the schools.

Drivers of communication. Communication at the schools largely depended on a teacher's proximity to others, specific location of a teacher within the school, and the service areas that are available. As mentioned in the previous theme, teachers at School B felt more isolated than at School A. A large driver of this is the fact that the teachers were moved from a single story building to a two-story building. One teacher who was actually located outside of the main building at School A felt that communication was easier and stronger at School A than School B. This was due to a single path of travel that all teachers had to take. This single hallway forced teachers to walk by one another's rooms, creating opportunities to see and hear what teachers are working on, easily stop in for a quick conversation, or even just a quick greeting. One teacher stated:

“There's so many different stairwells that there isn't one path. At [School A] there was really one path. Here, there are so many different walking paths that everybody's going in different directions that you don't even have to cross each other in that path.”

While there was not the same overwhelming sentiment of isolation at School D, teachers did still state the feeling of disconnectedness from other teachers. One teacher stated:

“When I was on the first floor (at School C)... I always knew who was on the first floor and never really saw who was on the second. When I was on the second floor... I would never see the first grade teachers without going to them and that's the same here”

The same teacher continued later to say:

“The floor separation is huge here...you might as well be in two schools because I rarely see the teachers upstairs. I wouldn't even know...if they were absent, I wouldn't know anything here.”

Floor separation is never optimal and many situations require a school to have multiple floors (such as in urban areas with limited land availability). However, its impact can be moderated by the size of the building footprint as well as how the floors are connected. One teacher mentioned that when at School C, there were multiple floors but they felt more connected since there was only one small circulation space on each floor and you would just “go up a flight of stairs...and that was basically it.” In this case, the multiple floors were still connected by only one path, forcing teachers to pass by each other while moving throughout the school.

One must also consider the pros and cons that come with every decision in a school as each decision impacts all other aspects of the system. To point, the same teacher that felt secluded from teachers due to the floor separation stated positive sentiment regarding the space when describing her current relationship with teachers at the same grade level. These are typically the other teachers with whom the most communication is required. This indicates a need to prioritize locations based on the level of need for communication. In situations in which two stories are required, there will inevitably be some teachers who run into one another more often but care should at least be taken in locating grades next to one another. To this point, the same teacher who above mentioned the disconnect between floors also stated:

“I do have to say that having our rooms for the first and second grade... close together like this is nice because we can...quickly catch somebody... we kind of walk by

each other quite a bit.”

Not all teachers had the luxury of being positioned by their same grade level, however. At each school, most of the classes were grouped in such a way but there were exceptions. In School B, one of the fifth grade classes was on the opposite end of the school from the two others and one third grade class was downstairs while the other two were upstairs. Considering what has been discussed thus far in regards to floor separation, proximity, and communication, this is a clear misstep in the schools’ designs in terms of affording for easy teacher communication.

General location throughout the school also has an impact on the amount of opportunities teachers had to talk with other teachers. This is especially salient in conjunction with movement paths throughout the building. Teachers at School B stated:

“I am way back here in the second floor corner and you really don’t see anybody...that is kind of surprising to me that it’s less conducive to communication than I expected.”

and

“We don’t see each other anymore...we’re all secluded...I feel like 4th grade doesn’t necessarily know what 5th grade is doing and 3rd grade doesn’t necessarily know...because we’re all in a very specific section of the school.”

The third identified driver of communication is the presence and location of service and amenity areas (e.g. copy machines, coffee makers, sinks, mail boxes). These give teachers a destination to which to travel and a reason to leave their classrooms. However, some surprising results occurred in regard to their placement’s

intent versus reality. For example, the new school designs include multiple teachers' rooms as well as multiple copy machines and other required service areas. This was intended to give each floor equal access to the services and amenities. However, their duplication created multiple places to which teachers could go and thus reduced the number of opportunities teachers would have to run into one another. A teacher at School D noted that teachers gather around the copy machines less at School D than they did at School C stating:

“They have a teachers' room upstairs; there's a teachers' room downstairs. Now I think that's only fair but....they have copy machines upstairs we have copy machines downstairs...I think we, we can kind of live in our own places.”

However, despite the issues that occur when multiple service areas are available, their existence in general is a key contributor to communication. Correlating with the findings from the observations, teachers stated that they often communicate with other teachers while waiting for the copy machine or printer. The teachers' room was stated to serve as a private location in which teachers can talk without fear of teacher volunteers or unwanted audiences listening. A teacher stated that though their classroom was actually outside the main building at School A, the fact that there were spaces inside the main building in which they must visit (both service areas as well as to take classes to their “specials”) created the opportunity to see other teachers and remain a part of the community within the school. The teacher stated that “...you didn't feel secluded even if it was technically secluded” due to the frequent opportunities to move through the main building.

The final driver of communication is the schedule of the teachers throughout the school day and the duration of time that multiple teachers are available to move through a space at the same time. For example, if classes have the same time period for their “specials”, the teachers will be traveling through the hallway at the same time and thus have opportunities for paths to cross. Additionally, if teachers have planning periods at the same time there is more freedom for them to communicate with one another.

The importance of schedule was identified in the focus groups and interviews and correlated with what was observed by the researcher. Since the observations were completed when the weather was cold, students spent more time at their lockers putting on coats and thus, teachers had even more time to communicate with one another. During the focus group at School B, one teacher stated:

“...when the kids are at the lockers, the [first grade teachers] are out there discussing and planning and I’m sure the same thing happens [upstairs].”

However, another teacher contradicted this assumption stating that the older children who were located upstairs do not get supervised as much as the younger ones. This adds a caveat in that the age of the students may moderate the impact schedule has on communication. Another moderator of the effect of scheduling is the aforementioned issue of multiple pathways. These two variables must work together to create a school in which teachers have the opportunity to be in the same space at the same time. One teacher at School B felt that scheduling was even more important than space in regards to communication stating that:

“... because they also had the same lunches, same recesses, same specials...the block scheduling allows for each grade level to collaborate, that's what [it's] supposed to be doing. Block scheduling would be the thing that changed [communication] more than anything, more than having a teacher workroom, more than having...those bump out rooms.”

Other teachers claimed the importance of schedule stating that “the schedule is what really helped the communication in the other building and also does the same here.” Regardless of which of the drivers is most important, the four mentioned here must work together within the broad system of the school in order to support communication in the best way possible. In summary, a teacher’s classroom location, his or her proximity to others, the availability and location of service and amenity areas, and the schedule of the teachers all impact the amount a teacher sees and communicates with other teachers.

Space use and adaptation. When moving in to any new space there is an adjustment period in which occupants become acclimated. This period can be shortened by taking certain steps and training and can also be elongated if the new space is too much of a mismatch in terms of needs and use. In the case of the moves from the traditionally designed schools to those with learning commons, teachers did make certain strides to acclimate themselves to their new space. Some of these strides match the vision of the architects while others created a situation in which the design is not being used as intended.

One issue that has occurred in Schools B and D is the lack of space for Title 1 professionals to work with students. This was most likely purposeful in that the

schools hope that these staff get in to the classrooms and work with students while they are participating with the rest of the class. However, what has resulted is their claiming the various breakout rooms and project areas, preventing the spaces from being available for teachers to use for their students. The finding in the communication log indicating that project/breakout spaces correlated more with scheduled meetings than unscheduled may relate to this situation. One teacher expressed concern of what this communicated to visitors and stated:

“You come up the main staircase and you see two teachers’ desks out in the hallway fully set up so you know people are working. It doesn’t look good, it doesn’t speak well.”

Some unintended uses, however, can be beneficial. For example, there is a teachers’ room on the first floor of School B that is rarely used due to its small size. As a result, some of these teachers eat lunch in the project area which is even more visible to those passing by and has high potential to afford for communication. Teachers also discussed using the project areas to meet after school for informal conversation and that other teachers would join them since they were visible as others were leaving.

While there was no formal training on how the new spaces could be used or tools given on how to collaborate effectively, teachers are beginning to adapt positively to the new facilities. The principal at School B helped this along by informally coaching some teachers on its use. One teacher stated that the principal mentioned that the project area would be perfect for a certain activity normally done with the students. Teachers also learn through experimenting on their own. A teacher

at School D discussed the experience using the amphitheater space for the first time to practice singing a song for an upcoming event:

“we've never had kids down there before...they all stood around, it's kind of a riser type thing and when you sing in that area...it just reverberates, it's got great acoustics for singing. The kids sounded beautiful and I was like - oh! I'd rather sing in this place! It's really a cool area. Now, since we've done that now, I'll use it more often. I'll probably take the kids down there and read a story to them or something. It might be a nice thing.”

This anecdote alludes to the potential for teachers to adapt to the space as well as serve as positive examples to other teachers on its potential uses. A teacher at School B however had the opposite experience when trying to use their amphitheater. This teacher stated:

“I was taking my students down to...the amphitheater...to do like a read a loud and second grade might be, or third grade might be having to get ready for lunch or even just children going to use the bathroom are walking by, are walking back and forth... the lockers are opening and closing and there's chatting and it's so loud in the amphitheater and that noise just carries all the way down the hallway... the sounds just seems to come in and amplify almost.”

Acoustics also came up when discussing use of the project areas. Being that the project areas are part of the circulation of the school, they are bordered by the lockers of the students. However, this creates the potential situation where students may be working in a project area when other students come to get their jackets from the lockers. Teachers at School B recounted this problem:

“I find that downstairs where for a while I was teaching... where it says “media” ...with the technology

classes and even though people are trying to be quiet, it's surrounded by lockers, classrooms, and just the fact of the locker noise and you know, trying to keep the little ones quiet down there that it can often get noisy and very distracting to do things in that area.”

These acoustical problems deter teachers from using the spaces intended for collaborative activities. Though both schools have a learning commons design, they still vary in terms of specific spatial aspects. Thus, it is possible that the acoustics of the amphitheaters vary and create a useable space in one school and one that cannot be used as intended in the other. This acoustical situation and the one in the project areas have the potential to be mediated if certain rules are put in places regarding hallway noise or times of use and thus represent another situation in which organizational intervention can aid the proper use of a space.

One feature of the space not yet discussed is the addition of classroom windows to the corridors so that teachers can easily see into the project spaces and breakout areas. This was designed to help aide their ability to supervise students using these spaces as well as create an environment in which teachers are constantly seeing other teachers. However, some teachers felt these windows were distracting to the students and placed curtains or storage carts in front of them. While this may better their perception of control over their class, it eliminates the benefit of visibility.

Classrooms were also designed to be a bit smaller so that teachers would implement the use of project areas on a more frequent basis. However, instead of recognizing this intent, teachers feel as if space was taken away from them and are frustrated about their apparent lack of space. One teacher stated:

“The gym is smaller, the cafeteria/auditorium is smaller, the library is smaller... we felt like there’s a lot of wasted space...it’s lovely to look down into the library but that could have been a learning space... the amphitheater goes right up to the skylight, that could have been another learning space or another lab space to perhaps extend their classrooms in some way... so that’s the kind of thing we’re looking at. We’re feeling like we’re cramped again.”

The attitudes that result create a negative atmosphere which can inhibit the positive growth of a collaborative environment but also means that spaces are not being used as intended. The adaptation of the windows as well as the negative feelings mentioned here are the results of teachers not understanding the design principles of the school. This is a communication issue that could have been resolved throughout the design process.

Spatial Prerequisites for Informal Communication & Collaboration

One goal of this study is to follow the work done in office workplace research by defining specific spatial factors and typologies that can impact communication patterns. Schools have begun to realize that “a formal organizational structure may dictate what is supposed to happen, but whether it actually does happen is, in large part, an issue of space” (Allen & Henn, 2007b).

While the space syntax analysis completed in this study was broad and thus, not exact, it did tend to follow the same trends from office workplace research in that the more visually and physically connected space had more instances of communication (Appel-Meulenbroek, 2010; Peponis et al., 2007; Rashid et al., 2006). The most salient finding from the communication log location data was that teachers

communicate most near or in their own classroom or the classroom of an adjacent teacher. This corroborates the intuitive finding that people interact more with others located within closer proximity (Sailer & McCulloh, 2012). Sailer & McCulloh (2012) also noted that differences between floors played a large role in determining locations of communication. This was found across all schools both in the communication log data as well as qualitatively in the focus groups and interviews. One addition was added to this concept, however; as other drivers were able to surpass the barrier of multiple floors, such as service area location or other movement draws such as having to travel to “specials” which are on a different floor.

These types of caveats can be extremely useful in the design of a school as they allow for an organizational component to overcome the barriers of a physical component and vice versa. For example, if due to geographic limitations, a school must have multiple floors, designers can build an understanding of the various spaces teachers have to interact with throughout the day and place these on different floors. While the movement patterns may not be as efficient in this case, if the goal is to create the movement of teachers necessary to afford for more informal communication, placing certain service areas or classrooms in this way can be successful. This counterintuitive recommendation of making something less efficient in order to achieve a different goal speaks to the systems nature of the school and we must be aware that all design choices will have both intended and unintended consequences that must be considered and prioritized.

The current study also provides insight into the initial creation of school design typologies similar to the ones delineating by Hua, Loftness, Kraut, & Powell (2010).

Some of the typologies found in the new learning commons design consist of project areas, breakout rooms, and classroom clusters. While the current study was unable to look at the specific impact the designs of these spaces had on movement and perceived levels of collaborative support, correlations can be inferred due to results from the TCS. One similarity of the spaces to those analyzed by Hua et al. (2010) is the relationship between the distance from workstation and meeting areas and perceived support for collaboration. The learning commons designs have more meeting spaces available through the project areas and breakout rooms. Every classroom is attached to a breakout room greatly reducing the distance between a teachers' effective "workstation" and a potential meeting area. The learning commons designs also have a higher percentage of floor space allocated for collaborative activities, again correlating to the findings from the office workplace studies. Further, the availability of a break area, multi-use circulation spaces, and variety of spaces were also included as impacting the level of perceived support for collaboration.

All of these spatial changes could be a potential driver for the increase in scores on the TCS. In the case of the current study, the subscale of *Collaborative Support Satisfaction* is somewhat comparable to Hua's measure of perceived support for collaboration. This measure increased after the moves to Schools B and D and increased more for School D further corroborating the current study's assumption that the underlying drivers of office workplace collaboration are similar to the drivers found in a school.

One item found important in the office workplace literature was finding the proper balance of collaborative support and distraction minimization (Hua et al.,

2010). While this was not initially something to be analyzed in this current study, distractions and acoustical issues being a large problem in the new school designs became apparent through the focus groups and interviews. One key difference in acoustics between School B and School D is their amphitheaters. Specifically, teachers said that the amphitheater in School D had great acoustics and was suitable for a variety of activities whereas teachers in School B said the area was loud and too distracting to use the space as intended. School D's amphitheater is located on the first floor between two clusters of classrooms. School C's amphitheater is also located on the first floor between classrooms with the addition of backing up to restrooms. This correlates with other anecdotes provided by teachers that bathrooms as well as lockers are very distracting. While amenity areas tended to be the largest distractors in office workplaces, it is logical that the largest distractor in a school would be a student service area rather than a teacher area. The only student areas are the bathroom and lockers and thus it is logical that these should be the main units of analysis when considering the placement and proximity to areas in which work should take place. An additional consideration when designing such areas is that teachers will also need to adjust the types of activities they intend to do in these open spaces. This is where organizational interventions such as training are imperative as certain spatial designs are intended for certain uses.

Creating shared space. Have a shared space is integral to communication occurring (Gislason, 2009; Gordon, 2010; Lieberman, 1996). While this intuitive claim is well accepted, what has not been explored are the various factors in achieving such shared space in a situation such as a school where much of the time is

spent in a private classroom. Schools cannot simply remove all closed offices or lower walls as office workplaces can in order to achieve the needed element of shared space. However, strategic spatial designs can increase the likelihood that teachers will find themselves together in one location. For example, centralized service areas, while inefficient in regards to distance teachers must travel and proximity to their classroom, can have a positive benefit on informal communication. The underlying driver behind this benefit is that with a centralized area, all teachers will be coming to the same space in order to use a certain service or amenity such as a copy machine or teachers' room. When all teachers are drawn to one location, the probability that they would be doing so at the same time increases.

A similar benefit was found from having a single path versus options between multiple routes. This was an issue salient to the teachers as it was brought up multiple times throughout the qualitative research. While multiple routes were chosen in the design to reduce congestion in the hallways as well as meeting required fire codes, the unintended consequence was teachers each using different stairwells to move from one floor to the other, often secluding their movement from that of other teachers'. This movement choice is anticipated in light of research on spatial depth as a main driver of route choice (Chang, 2002) as well as space syntax analysis of the space in regards to connectivity (Rashid et al., 2006). While this current analysis did not measure the connectivity between floors, the same concepts should apply when having to choose between routes on a flat plane. For example, when two spaces are connected by one hallway, this hallway will by default have the largest level of connectivity on the floor. When an additional hallway or path is added, the connectivity of each are lessened and

this trend will continue as more hallways are added. The resulting conclusion is that in order to create an environment that maximizes the potential opportunities for informal communication, options should be minimized.

Overall, the various spatial prerequisites for informal collaboration can be reduced to creating the need for movement and creating required “shared space.” These can both be accomplished by providing places to which to travel and limiting duplication, respectively. Without a place to go, one will intuitively remain in their own areas. Duplication results in choice and choice results in the lower probability of two teachers residing in the same space at the same time.

Organizational Prerequisites for Informal Communication & Collaboration

In addition to the loosely coupled nature of schools that was apparent throughout the analysis of the study schools, principals and teachers often had contradicting opinions of the use of space, specifically at School B. This can be seen in teachers modifying their windows to reduce visibility, not using the project areas for collaborative work, or communicating inside their classrooms rather than in the new open circulation spaces. Since it is assumed that the principal’s opinions of the space use match the use that was intended, it can be interpreted that his/her contradiction with teacher opinion reflects the fact that the designated use was either not communicated to teachers or not afforded for due to the various spatial and organizational factors discussed in this thesis. Regardless, this situation partially results from the loosely coupled nature of schools and that the “formality” of the project spaces becoming hubs of collaboration is currently a “myth” in reality (Meyer

& Rowan, 1977; Weick, 1979). Due to the distance (both physical as well as organizational) between teachers and administrators during technical activities, direct leadership cannot make a large impact on daily communication patterns (Cattonar et al., 2007). This is why better positioned drivers of change should be implemented, such as organization or spatial interventions. Another response to loose coupling would be to “tighten up” the organization through more classic bureaucratic means. However, instead of changing the organization of a school, many schools operate informally underneath a dual system in which instruction and technical activities are loosely coupled whereas other elements within the school (e.g. schedules, amenity and service area availability, etc.) are tightly coupled (Owens & Valesky, 2011). Owens & Valesky (2011) outlined various elements that are easily controlled that can have indirect impact on things more loosely coupled. The elements that had the most impact on communication specifically were: *control of time*, *grouping*, and *control of resources*.

Control of time. Time is a necessity when it comes to communication and teachers must be available simultaneously for it to occur. The 1994 *Prisoners of Time* report from the National Education Commission on Time and Learning recognized the fact that the majority of a teachers’ day is spent in isolation with their students and thus, time must be provided if professional development and communication are to be a priority (*Prisoners of Time*, 1994). The benefit of shared time was seen during observations of the schools where classes had “specials” at the same time, giving certain teachers concurrent planning periods. The factor of time was also apparent in some of the focus groups and interviews as teachers mentioned their preference for

having lunch and planning periods scheduled with other teachers in order to aid communication. Time, however, is also most subject to the contracts with the teachers' unions as limits/minimums are set on the time teachers are to be available for planning and development. While the unions are there to ensure that teachers have enough time for such activities, their presence can backfire if teachers feel that collaborating does not fit in to the time allocated for their own planning.

Grouping. Grouping has the most obvious impact on formal collaboration as it can involve pairing teachers together to teacher as a team. However, grouping also includes the concept of positioning teachers physically close to one another. While this overlaps with the spatial prerequisite of proximity, grouping can be an independent process from the design as it can involve moving teachers around preexisting rooms in order to facilitate certain relationships. This concept was discussed in the focus groups and interviews and teachers expressed the benefits of being clustered by grade level and the consequence of some being located in other parts of the building.

Control of resources. While the placement of amenities is also a spatial issue, it is up to the organization of a school to determine what equipment to provide. While spatially it is a benefit to limit duplication of service areas in regards to benefiting communication, it may be required due to the volume of use to have multiple copy machines or sinks or other service areas and amenities. A balance is thus necessary which optimizes the required number of resources without sacrificing the potential to impact communication.

Training. Loose coupling aside, the issues here can be related to the change management literature, specifically The ADKAR Model and its five elements that must be in place for change to occur: awareness, desire, knowledge, ability, and reinforcement (Hiatt, 2006). The first two, awareness and desire, are related back to the discussion on the value that teacher's place on collaboration and communication with other teachers. This value has been established, especially at the level of social relationships and community among the teachers, something that informal communication can help support. What is still lacking and is most apparent within schools today is knowledge and teachers' receiving the proper education on how they go about changing, in this case, training on how to collaborate effectively. They are getting stuck at this point where frustrations can mount as they are aware of the need, have the desire to do something about it, but don't seem to know how.

It is this step of "knowledge" that deserves the most attention in research to come. Further, the training literature that does exist only addresses collaboration with a focus on formal collaboration such as professional learning communities or team teaching (Brouwer, Brekelmans, Nieuwenhuis, & Simons, 2012; Crow & Pounder, 2000; Goddard et al., 2007; Louis et al., 1996; Pugach & Johnson, 1995; Santagata & Guarino, 2012). None have yet to explore the potential training can play in the informal communication of teachers. Similarly left out of the training literature is its potential influence on space use (or vice versa).

The results from this study support the need for exploration into teacher training with respect to use of the new space. No formal training was given for the new collaborative spaces. However, informal coaching was provided by the principals

who gave teachers ideas on ways the spaces can be used for their current lessons. Teachers were also given an opportunity to tour the new spaces prior to moving, perhaps affording them more opportunities in which to become familiar with the possibilities. However, what has transpired in both of the new schools is the organic adaptation to the space. While this could ultimately have the same result over time, training could help expedite the transition process and help ensure the spaces are used as intended.

The Systems Nature of Schools

Gislason (2009) discussed that the two required factors for successful teacher collaboration was having both shared space and shared time. The previous two sections discussed how to achieve both separately but many of the interventions impact one another and can work symbiotically to maximize the instances teachers find themselves having both shared space and shared time. For example, scheduling “specials” concurrently will create an opportunity for teachers to see one another while taking students to their appropriate “specials” room. However, a dual requirement of this occurring is that the teachers’ paths actually cross. Thus, it is important that duplication of paths is minimized while concurrent scheduling optimized.

The school as a system is an important concept in regards to the relationship between the way teachers teach and the spaces in which they teach. Some of the issues that the study schools are experiencing such as acoustic problems and the misuse of space result from a lack of adjustment in teaching practices and organizational

structure and are not much different than the ones that resulted in the demise of the open school movement (Clark, 2002; Cooper, 1981; Gislason, 2009). Architects and administrators tend to have a clear vision of the expected use of space and assume that teachers will adapt towards this end over time. However, due to various factors, including the overall loosely coupled structure of schools, this too often fails to occur. In order to prevent this, training is essential as well as ensuring that the required adjustment in teaching practices is feasible with the current employees and organizational structure. If not, more intensive change management practices would need to be implemented, the details of which are beyond the scope of the study at hand.

Another component of the school as a system is the labor management climate. When moving forward with any changes, schools must focus on managing this climate as well as simply adjusting to the changes and managing themselves. Basically, a partnership needs to be instilled with the union in order to successfully implement any changes. A study on the best practices of such partnerships includes focus on four categories: contextual motivation, strategic priorities, supportive system infrastructure, and sustaining factors (Rubinstein & McCarthy, 2010). The supportive system is the item most related to the subject at hand and involves a change in organizational culture and more communication regarding the management of the facilities and teachers. The relationship that the labor union needs to have with the district falls in line with the theme of more communication and collaboration needed across all levels of the system.

A school in which teachers encounter one another more frequently can create an internalization of the communication process and a person may begin to see him or herself as more collaborative. Further, more collaborative workers will alter the social relationships and climate of the organization. A person's opinion of oneself (in this case, the extent to which one identifies as a collaborative individual) can be impacted by the experiences one has. If a space affords for more run-ins with others by implementing key organizational tactics and purposeful spatial layouts, what results is an iterative relationship that continually builds up a person's abilities and desires to communicate. All of this can relate back to Vygotsky's notion of proximal development and task internalization being integral to collaboration (Levine & Marcus, 2007). Vygotsky discussed the need of repetition with experiences before internalization can occur. Thus, it is necessary to have an environment in which teachers can regularly engage with each other and in turn, internalize the best practices being used. When these best practices are implemented, the teachers should see positive outcomes in the classroom, creating an extrinsic motivator for continuing the process. Additionally, with the increased professionalization of the field, autonomy of the teachers as a unit will be increased along with the growth of their collaborative organizational identity. When all of factors work together in tandem, what results is a systems level impact on a school's communication and collaborative identity.

Implications for Future School Design

The implications that this study has on the future design and organization of schools stem directly from the aforementioned discussion on spatial and organizational prerequisites for informal collaboration. Note that these implications

are given under the assumption that the goal of the design is to increase the potential for teachers to communicate with another informally throughout the day. This informal communication is important due to its larger potential to influence the overall collaborative environment of the school than formal methods of collaboration. Supporting informal communication also has the potential to both align with the current call for the increase in the professionalization of teachers while allowing them to maintain certain levels of autonomy. This assumption however means that the following recommendations may have other consequences, both positive and negative, that are not addressed due the systems nature of schools. This being the case it is imperative that all designs be created for the specific school organization and user group. This all being said, the following are the broad implications of the study at hand.

- 1) Create shared space by centralizing service areas. For example, instead of scattering printers and copiers throughout the school, create hubs of services around which teachers will have the opportunity to gather for stereotypical “water cooler” conversations.
- 2) Limit options in regards to movement by designing singular paths. While multiple paths both in terms of horizontal circulation and stairwells are appealing from a traffic congestion point of view, they lessen the probability for teachers’ paths to cross.
- 3) Encourage movement by the strategic positioning of spaces for “specials”. Especially in multistory buildings, some teachers may never travel to certain parts of a school without a reason to do so. Once familiar with the specific

offerings of a school, certain spaces can be scattered throughout the school to create drivers of movement.

- 4) Create shared time through concurrent scheduling of “specials”. While obviously not all classes can have the same “specials”, those teachers who need to communicate with one another more frequently should have the same schedule throughout the day. Most often this means that “specials” should be scheduled by grade level. However, grade levels should not be the sole focus at all levels of intervention as they have the potential as a unit to feel secluded from other grades.
- 5) Surpass impacts of loosely coupled systems by providing teacher training on collaborative space use and communication expectations.

Limitations and Future Research

Limitations. While the study offers necessary steps in understanding the impact spatial design can have on teachers’ ability to communicate, there are some limitations. The case study design of this study limits the ability for external generalization, has weak internal validity due to lack of control groups, and ambiguity in regards to a causal direction of findings.

Throughout the move from the “before” school to the “after” schools most all organizational and staffing structures were kept constant. However, there were some inconsistencies which could potentially confound the findings of the study. While the same principal ran both School A and School B, a new principal took control of School C the summer before the teachers and students transferred to School D. During

interviews, teachers did not indicate any salient differences in the way the school was managed or changes in its support for collaboration, however, many changes may not be obvious and it is very possible that the administration change impacted the teachers' perception of collaborative support.

As is common in many in-depth case studies, the sample size was limited. While this does not impact the integrity of the findings presented here, it does limit further their ability to be generalized to other populations. Another consequence of a small sample is the inability to view the patterns throughout the schools in their entirety. While certain patterns were seen among the participating teachers, these are specific to the teachers' grade level, subject taught, and locations throughout the schools. Individual differences between teachers are also more salient with smaller participant pools. This can include teacher's general dispositions and tendency to communicate with others. Tenure of teachers was also not taken into account. Tenure at the school could impact communication as the longer one is working with certain teachers, the more social relationships develop and thus, more communication could potentially occur.

The case study design also allowed the researcher to become intimately acquainted with the teachers and administrators of the study schools. This being the case, experimenter bias when interpreting the data is possible, despite thorough efforts to view the data as objectively as possible. This experimenter expectancy could play a role not only in the analysis but also during focus groups and interviews. Due to their semi-structured nature, experimenter expectancy could have potentially led participating teachers to respond in certain ways. Participants also knew that their

communication patterns were the unit of analysis and thus may have guessed the hypothesis driving the study, impacting their responses during interviews and focus groups. More likely, however, is the presence of evaluation apprehension. While all participating teachers were insured that all possible efforts would be taken to protect their anonymity, this is difficult in such small schools. To remedy this fear and encourage open communication, off-the-record responses were encouraged when necessary and were not recorded. While this means this data was not used in the study, it helped build a level of trust with teachers, enlarging the amount of information they did freely provide and allow to be recorded.

Limitations are also found in the chosen methods of data collection. The communication log was completed at both the “before” schools and the “after” schools for two weeks. The length of the data collection period was necessary in order to get a clear picture of the communication patterns as well as allow for days in which communication may be atypical. However, the length of time is also more conducive to attrition (participants dropping out of this portion of the study before it is complete). While this does not prevent any already collected data from being analyzed, it is possible that the communications logged were not representative of their general trends over the entire two week period. Testing effects could also exist in the Teacher Collaboration Scale as teachers were given the same scale while at the “before” schools and at the “after” schools. However, being that the length of time before the two was almost a full year, this effect is unlikely.

Future research. Future research should begin to study the aforementioned design implications in a more rigid setting. For example, the concept of creating

shared space by limiting duplication of service areas and pathways can be studied experimentally. This is necessary in order to generalize the findings to other schools and populations and test to the validity of the implication in general. Also, this study analyzed the impact that different spatial designs had on a stable population. A companion study could be one in which the space does not change but the population does, allowing to sparse out the spatial drivers versus organizational drivers as well as create a larger case for the generalization of the findings. This situation is actually plausible in the K-12 sector as many school districts implement the use of prototypes in their school designs meaning that multiple schools may have the exact same spatial layout.

More case studies such as this should also be completed with more longitudinal foci. Moves to new facilities require a necessary transition period in order for behavior and use patterns to stabilize. It would be optimal for the teachers to be teaching at the new facility for at least an entire school year, if not more, in order to ensure that observed effects are not simply the result of being in a novel environment but instead result from the actual change in the design. Future case studies should be completed with this in mind.

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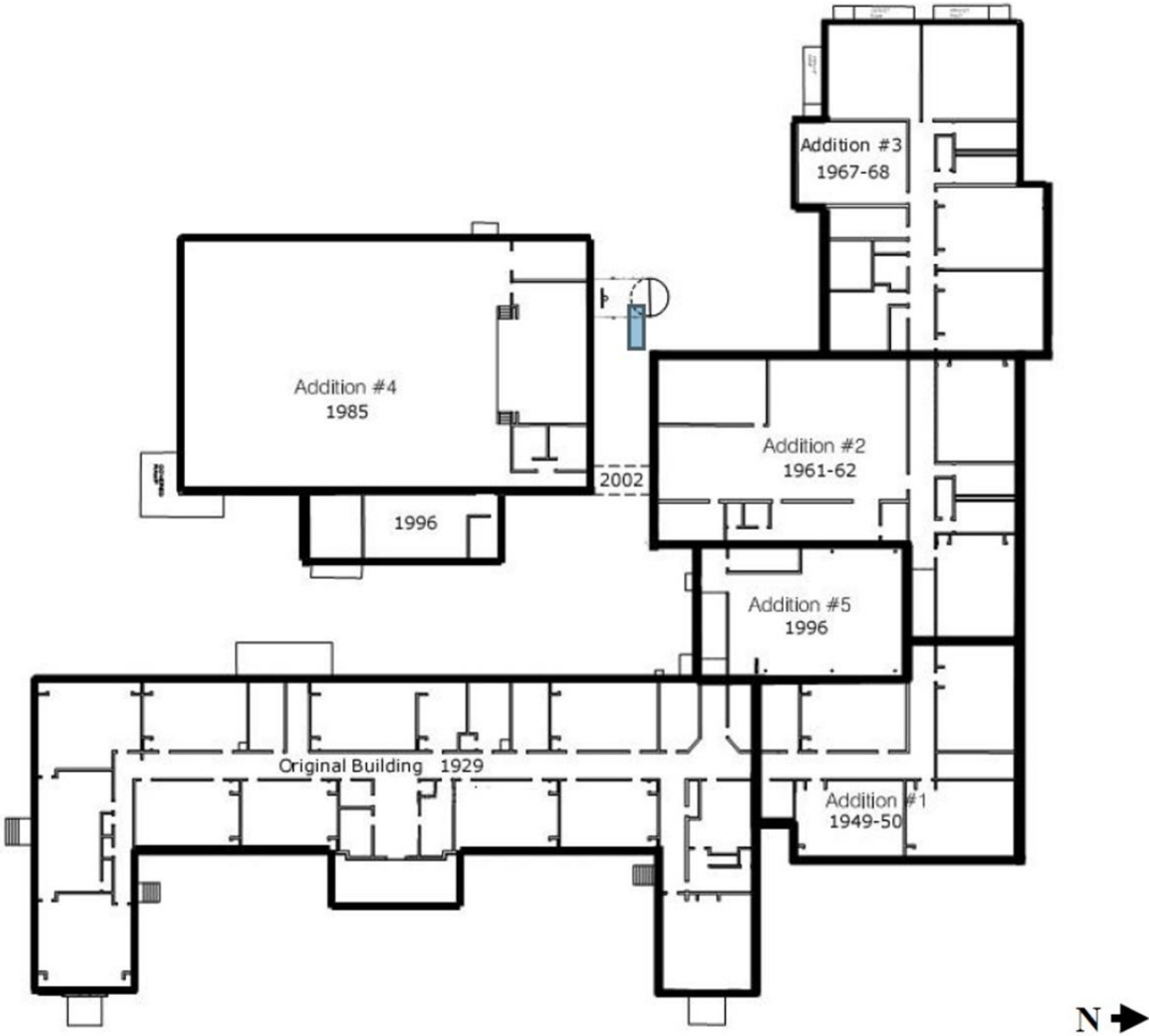
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Appendix A: Participating School Floor Plans

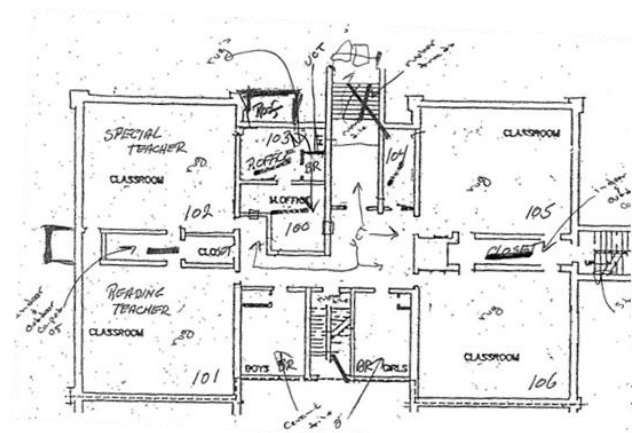
School A Floor Plan



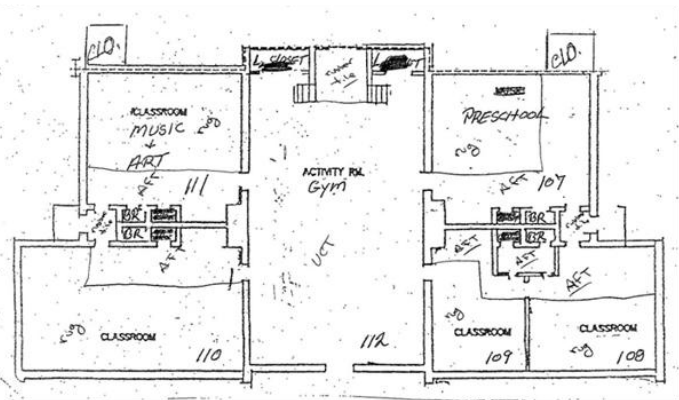
School B Floor Plan



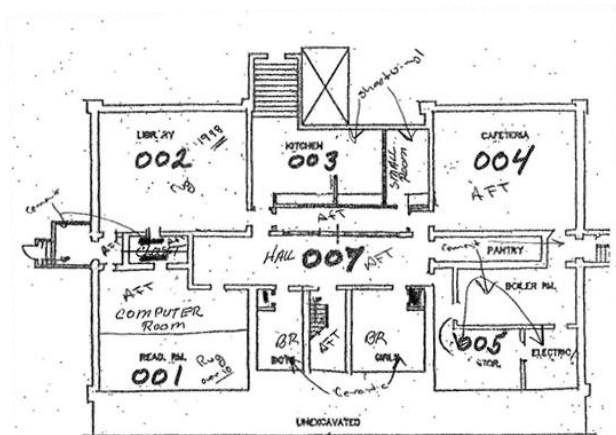
School C₁ Floor Plan



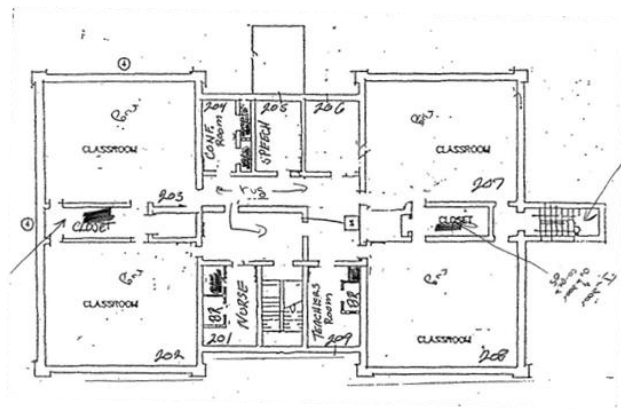
Main Floor



Off Gym

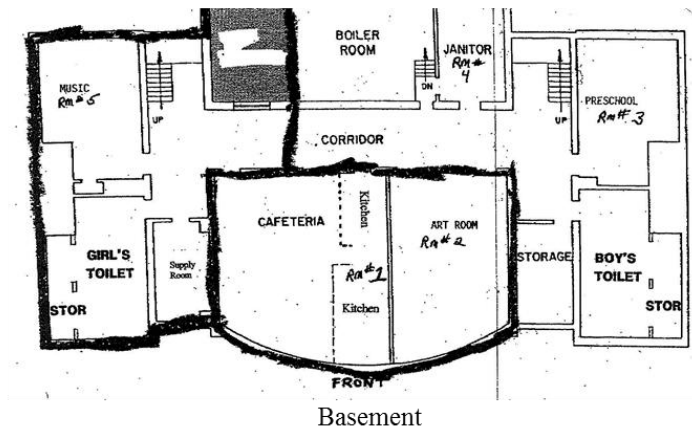


Bottom Floor

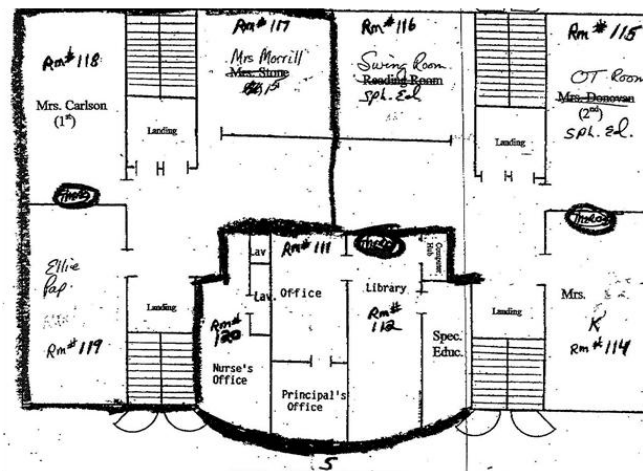


Top Floor

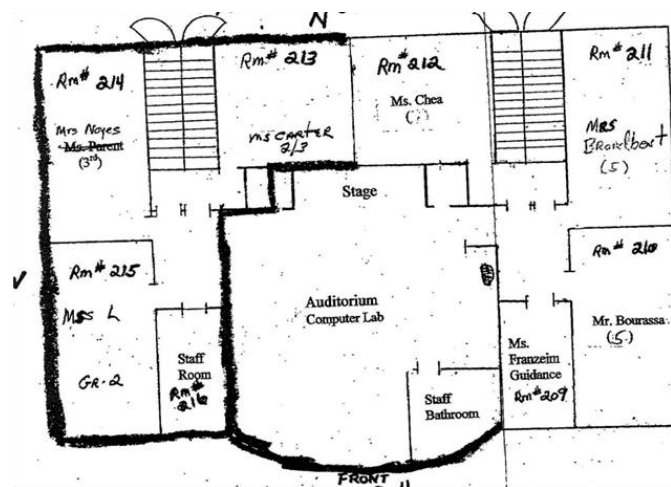
School C₂ Floor Plan



Basement

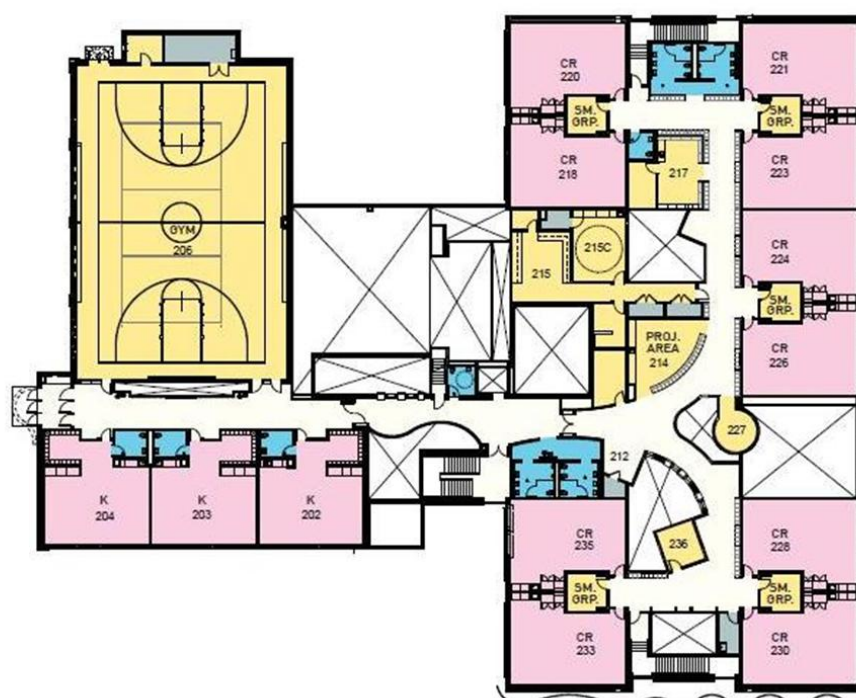


1st Floor



2nd Floor

School D Floor Plan



Appendix B: Teacher Collaboration Scale

Teacher Collaboration Scale (TCS)

Thank you for taking the time to complete the following survey regarding the collaboration between teachers at your school. This survey has 36 items and should take you approximately 10-15 minutes to complete. After answering some preliminary demographic questions, please select the level you agree or disagree with the following statements regarding your current school of employment. All questions are voluntary and no identifiers will be collected to connect you with your answers. Your completion of the survey serves as your consent to participate. Please contact Raechel Schneider at rds282@cornell.edu if you have any questions.

What is your age?

- ☐ 20-25
- ☐ 26-30
- ☐ 31-35
- ☐ 36-40
- ☐ 41-45
- ☐ 46-50
- ☐ 51-55
- ☐ 56-60
- ☐ 61-65
- ☐ 66-70
- ☐ 71+

What is your gender?

- ☐ Male
- ☐ Female

How many years have you been teaching?

- ☐ 0-5
- ☐ 6-10
- ☐ 11-15
- ☐ 16-20
- ☐ 21-25
- ☐ 26-30
- ☐ 31-35
- ☐ 36-40
- ☐ 41+

How many years have you been teaching at your current school?

- ☐ less than 1
- ☐ 1-2
- ☐ 2-3
- ☐ 3-4
- ☐ 5-10
- ☐ 11-15
- ☐ 16-20
- ☐ 21-25
- ☐ 26-30
- ☐ 31+

What subject/grade do you teach?

Q2.1 I feel well-informed of important information at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.2 It is easy to communicate face-to-face with other teachers at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.3 I always feel that I am learning while working at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.4 I feel a commitment to my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.5 I know my school's future plans.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.6 I have the information needed to do my work well.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.7 I am well informed of the current best-practices at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.8 I regularly meet with teachers from other grades/departments.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q2.9 I spend little time in my school's teachers' lounge/break room.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.1 There is a line of trust between teachers at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.2 Teachers at my school work together in a well-coordinated fashion.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.3 Teachers at my school typically agree upon common goals.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.4 There is a sense of professional community within my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.5 Teachers at my school share responsibility for student outcomes.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.6 I often eat lunch with other teachers.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.7 Team teaching is commonly practiced at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.8 Teachers at my school use amenity spaces (e.g. teachers' lounge/break room or work room) to discuss their classes.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q3.9 Teachers at my school do not have equal control over resources.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.1 There is a space for teachers to spend time outside of their classrooms at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.2 The teachers' lounge/break rooms at my school are spaces for relaxation.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.3 The teachers' lounge/break room is easily accessible from my classroom.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.4 Collaboration is valued at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.5 Teachers at my school are rewarded for their students' achievement.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.6 My school's administration is aware of all teachers' activities.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.7 The administration at my school is empathetic to teacher issues.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.8 Teachers at my school typically have good working relationships with the administration.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q4.9 Teachers at my school do not have a voice in school decisions.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.1 There are adequate types of collaborative spaces at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.2 I am satisfied with my school's availability of spaces for collaboration needs.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.3 I am satisfied with my school's availability of suitable spaces for collaboration needs.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.4 There is a good variety of collaborative spaces at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.5 I am satisfied with the arrangement and furnishing of the teachers' lounge/break room at my school.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.6 I am satisfied with my school's collaboration environment in general.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.7 I am satisfied with my school's communication tools and technology.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.8 I am satisfied with the balance of privacy and distraction I have throughout the school day.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Q5.9 I cannot always find a space to carry out collaborative work when I need it.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Somewhat Disagree
- ☐ Neither Agree nor Disagree
- ☐ Somewhat Agree
- ☐ Agree
- ☐ Strongly Agree

Appendix C: Communication Log

Teacher Communication Log

Thank you for taking the time to complete the following communication log. The log should only take 5 minutes to complete and should be done during your lunch break and again at the end of the day. The log asks for your name, which teacher(s) you have communicated with, what time and where in the school the communication occurred, and the topic of conversation. All names will remain completely confidential. When completing the log, please only answer the questions based on one instance of communication at a time. You will have the opportunity to enter in multiple instances of communication at the end. For example, if you ate lunch with three other teachers and then met another two teachers in the hallway, these are two separate instances of communication. Please fill this out twice a day (once at lunch and once at the end of the day) for the entirety of the data collection period (xxxx-xxxx). If communication occurs after the second log of the day is completed, please log it the following day at lunch. Please contact Raechel Schneider at rds282@cornell.edu if you have any questions.

Type your last name here (please enter the same name for each log entry; your name is only used to track your responses and will remain confidential. If there are multiple teachers with the same last name at your school, please use your first initial as well):

Have you communicated face-to-face with any teachers since your last log entry (or this morning if this is your first entry)?

- ☐ Yes
- ☐ No

Were there any teachers with which you wanted to communicate but were not able?

- ☐ Yes
- ☐ No

Why were you unable to reach this teacher(s)?

Has this been a typical day in regards to communication?

- ☐ Yes
- ☐ No

Please Briefly Explain.

Communication 1: Please select the teacher(s) you communicated with from the last names below (think of one instance of communication; you will have the opportunity to document other instances throughout this log).

- ☐ [List of teachers' names here]
- ☐ Other (please specify the teacher's last name(s) _____)

How long did you communicate with this teacher(s)?

- ☐ < 5 min.
- ☐ 5-10 min.
- ☐ 11-15 min.
- ☐ 16-30 min.
- ☐ 31-45 min.
- ☐ >45 min.

What time did this communication occur?

- ☐ Before school
- ☐ During morning classes
- ☐ During lunch
- ☐ During afternoon classes
- ☐ After school
- ☐ Other (please specify) _____

Please use the floor plan below to answer the next question.

Where did you communicate with this teacher(s)? (click the locations on floor plan below)

[INSERT FLOOR PLAN HERE]

What did you discuss with this teacher(s)? (select all that apply)

- ☐ Lesson Plans
- ☐ Student Behavioral Issues
- ☐ Administrative Issues
- ☐ Scheduling
- ☐ Team Teaching
- ☐ Student Motivational Issues
- ☐ Other (please specify) _____

Did you initiate this communication?

- ☐ Yes
- ☐ No

Was your goal for this communication met?

- ☐ Yes
- ☐ No

Was this a scheduled meeting?

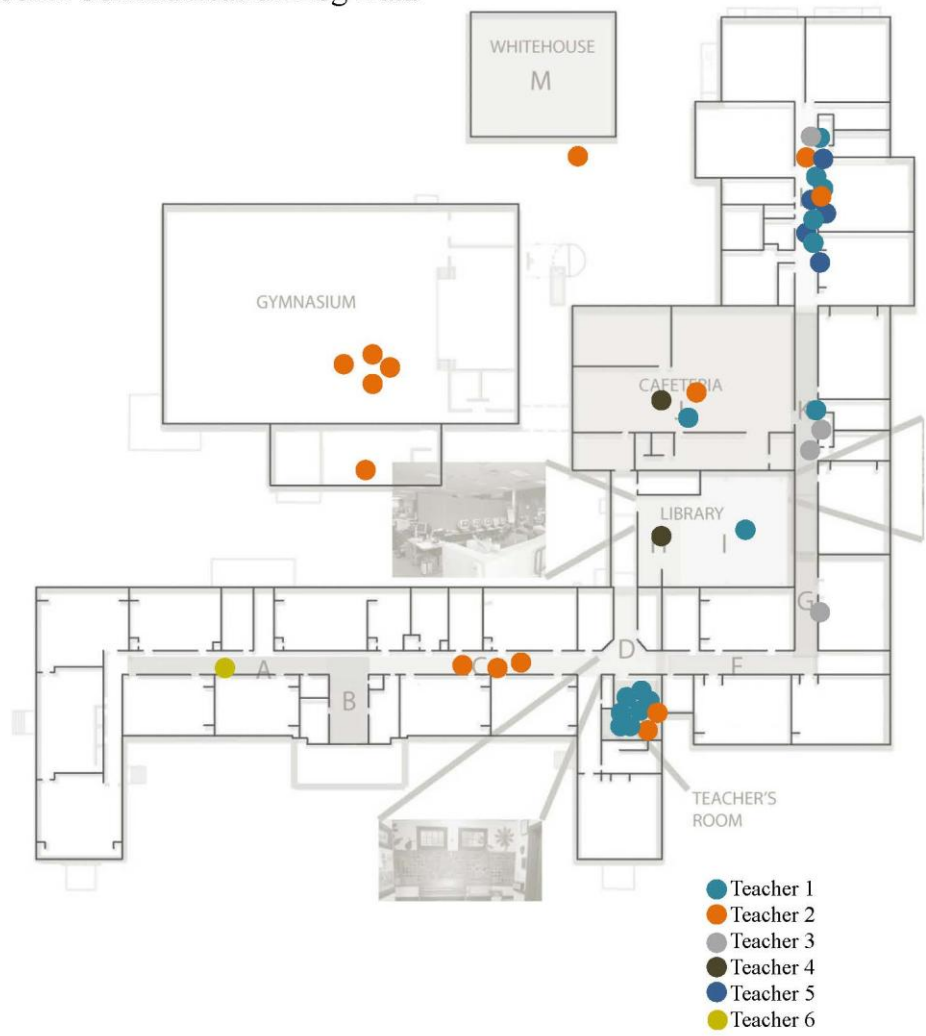
- ☐ Yes
- ☐ No

Were there any other teachers with which you communicated in person since your last log entry?

- ☐ Yes
- ☐ No

Appendix D: Communication Log Location Maps

School A Communication Log Data



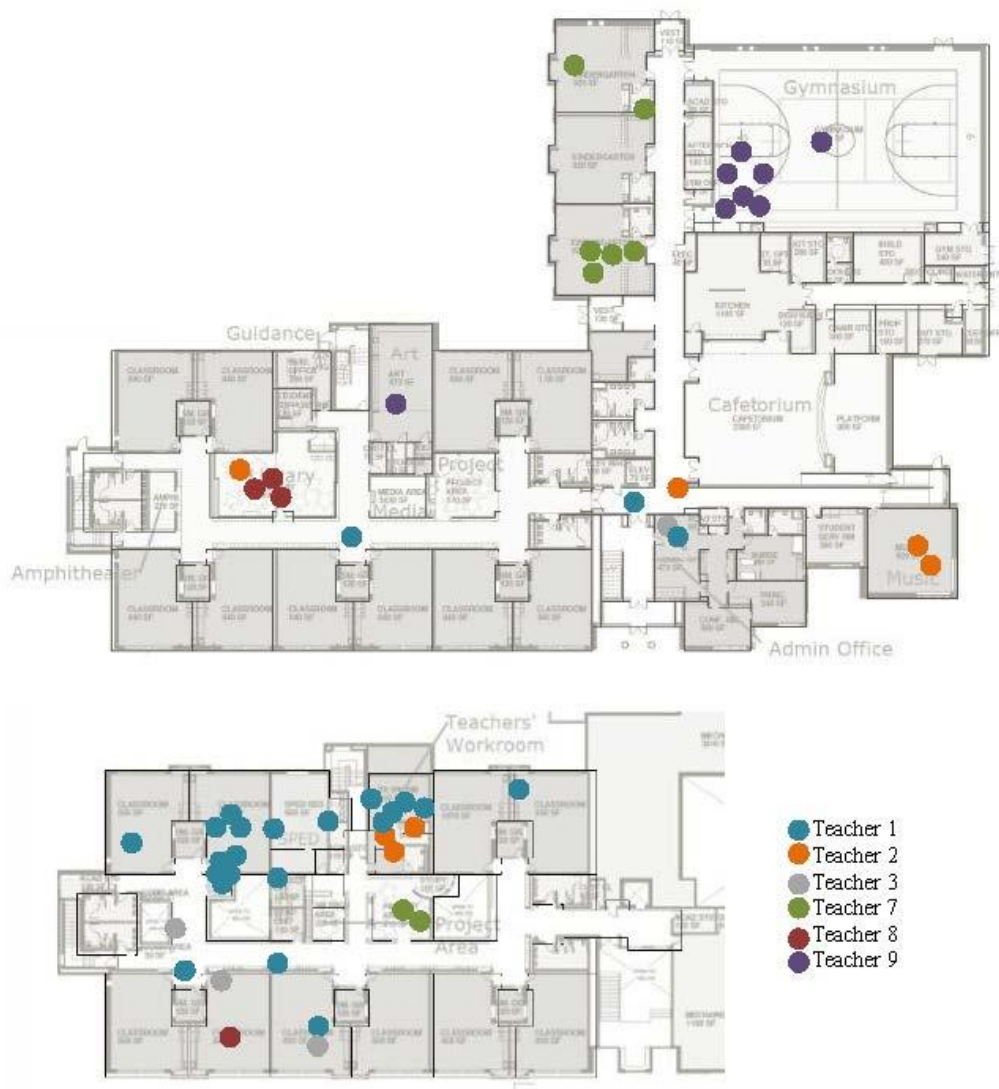
School C₁ Communication Log Data



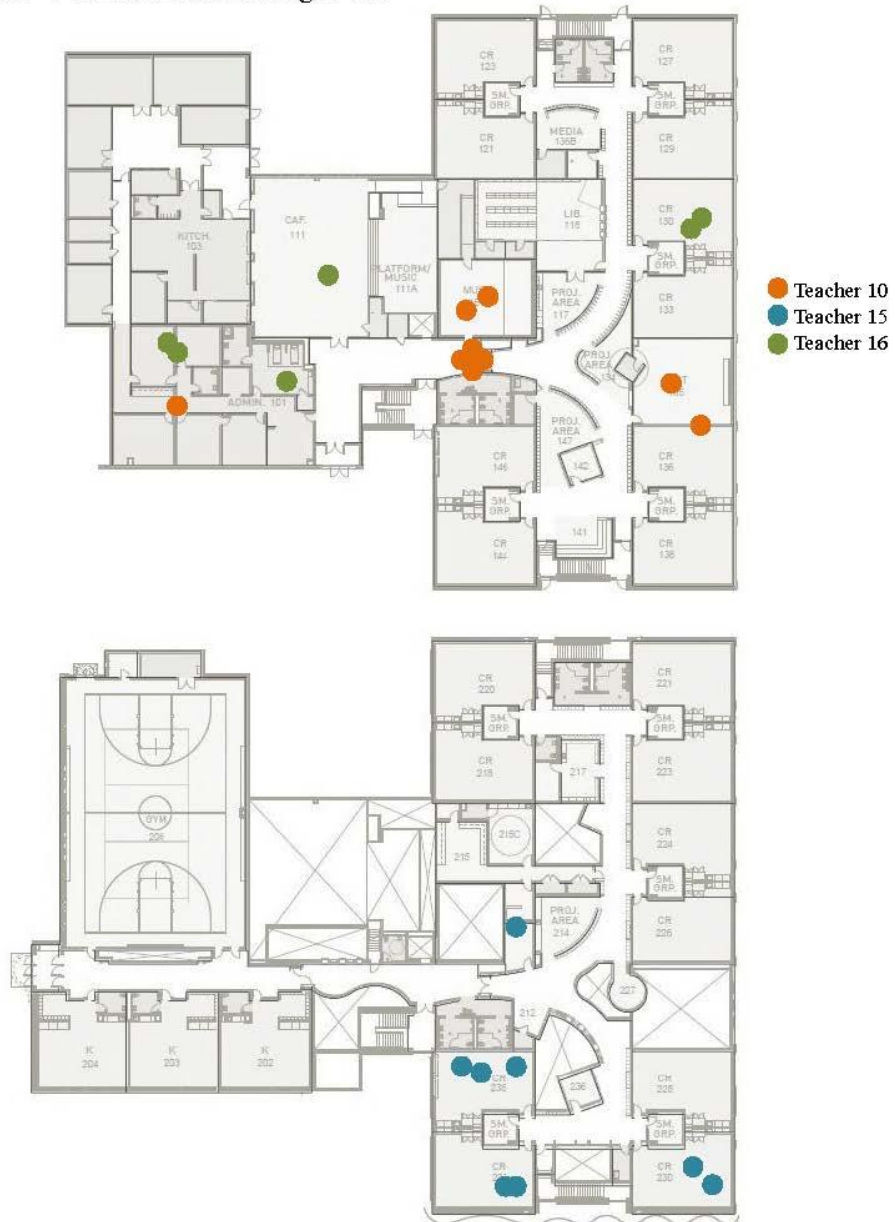
School C₂ Communication Log Data



School B Communication Log Data

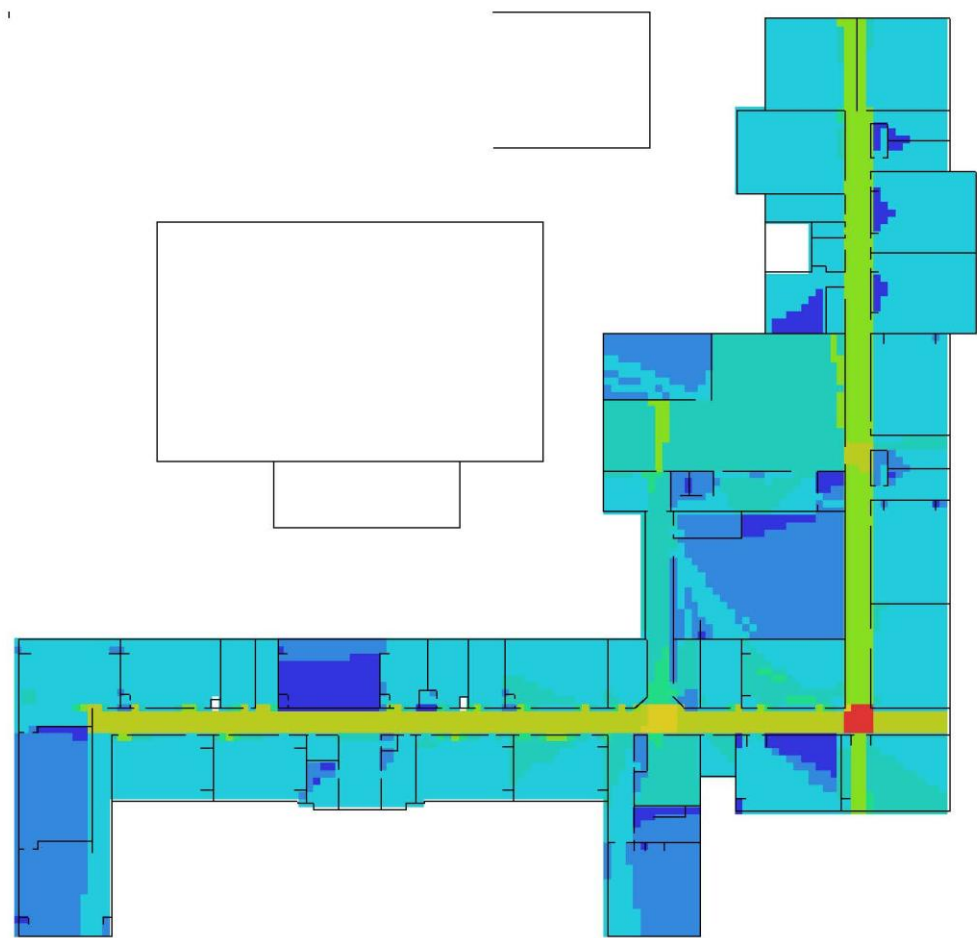


School D Communication Log Data

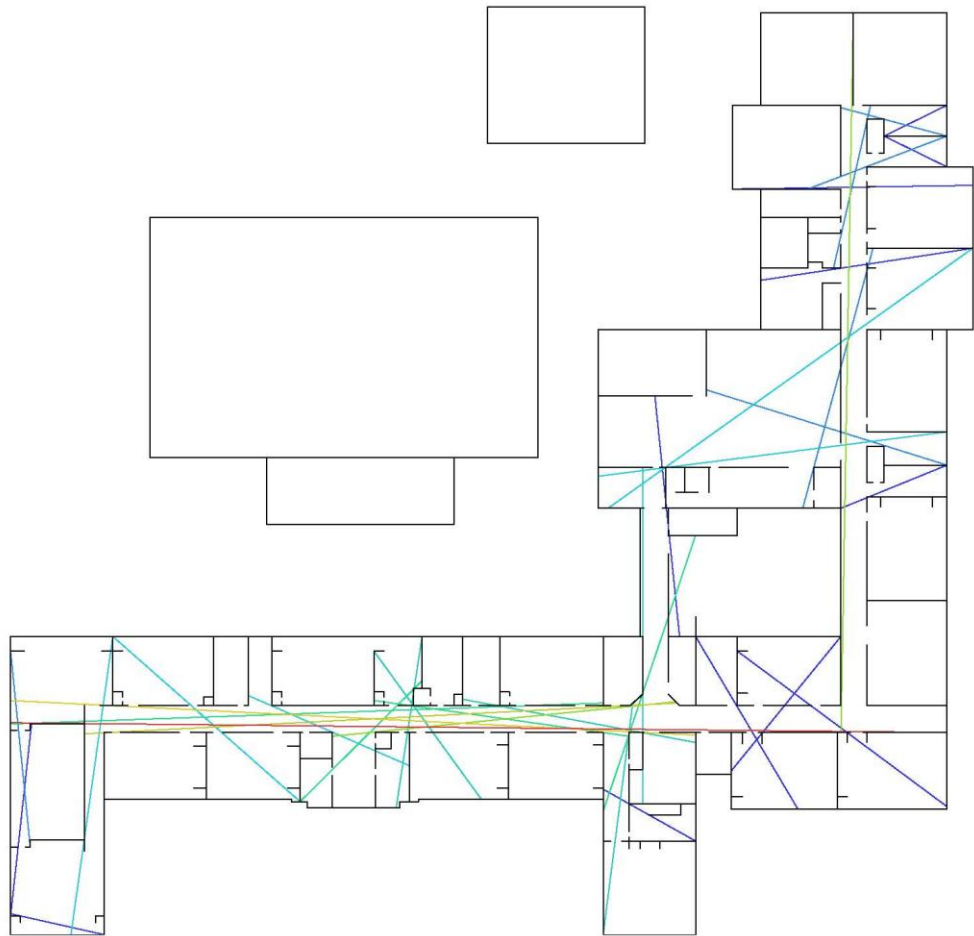


Appendix E: Space Syntax Analysis

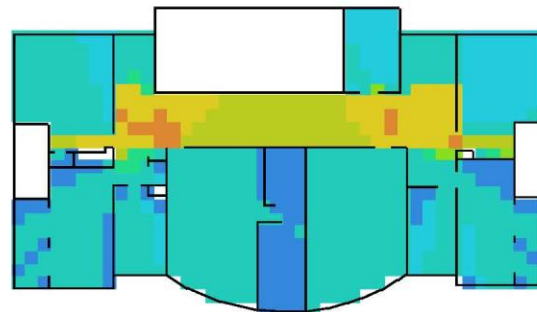
School A Visual Integration Map



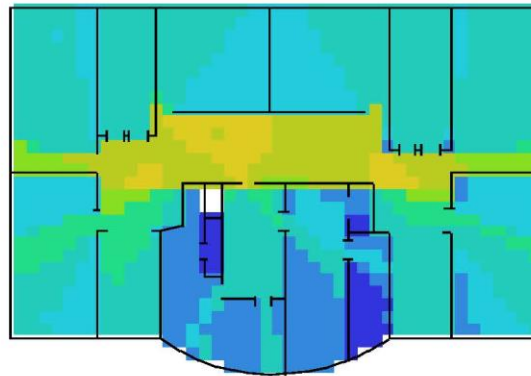
School A Axial Map



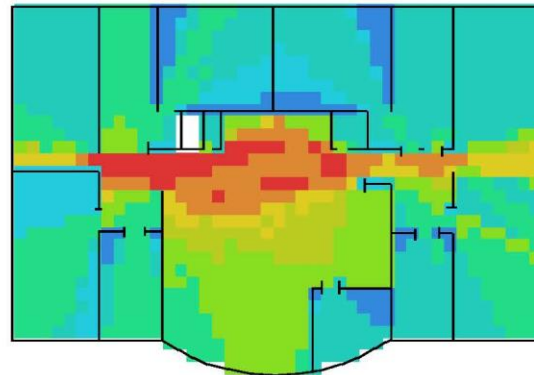
School C₂ Visual Integration Maps



Basement

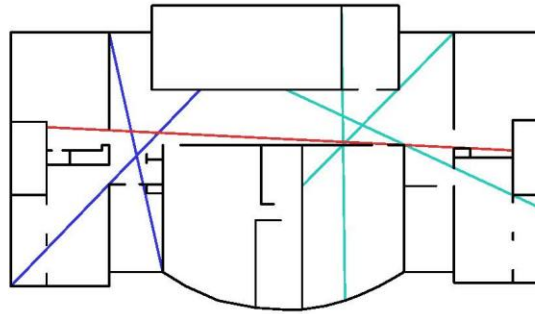


1st Floor

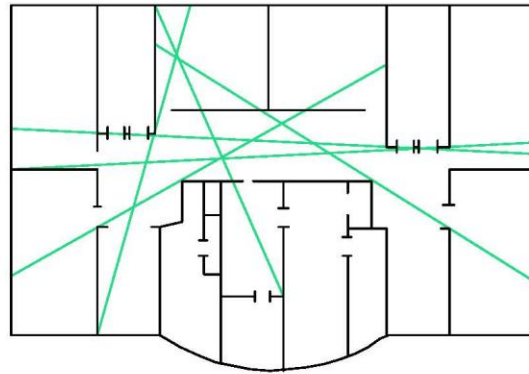


2nd Floor

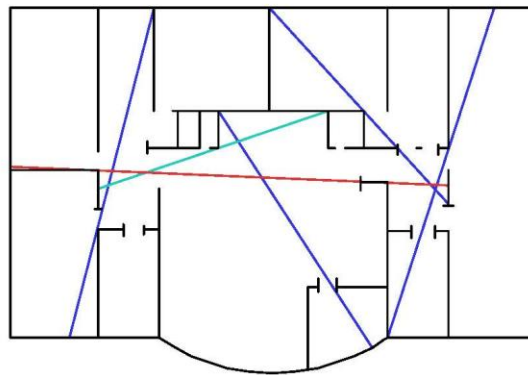
School C₂ Axial Maps



Basement

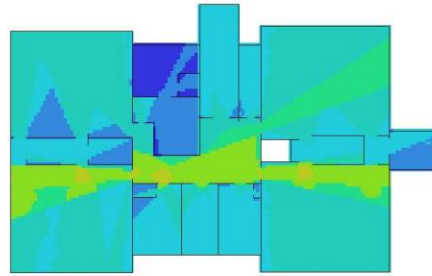


1st Floor

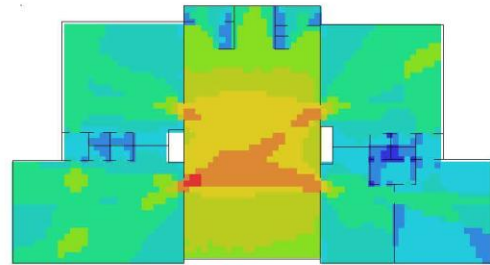


2nd Floor

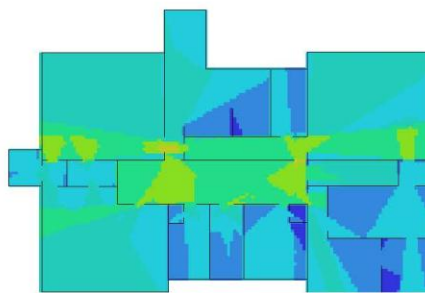
School C₁ Visual Integration Maps



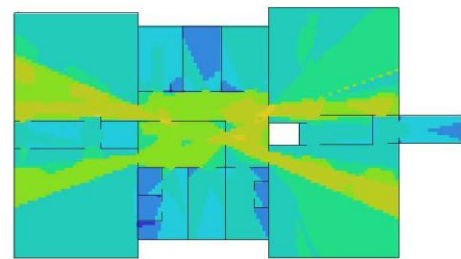
Main Floor



Off Gym

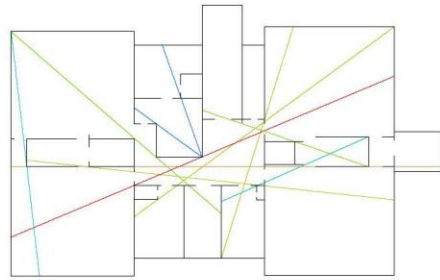


Bottom Floor

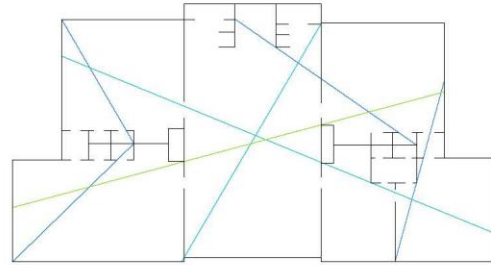


Top Floor

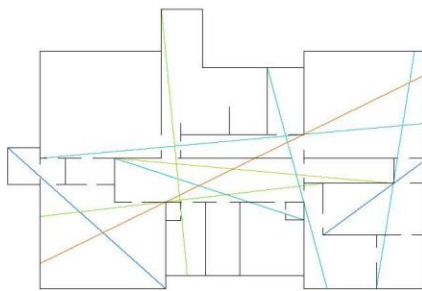
School C₁ Axial Maps



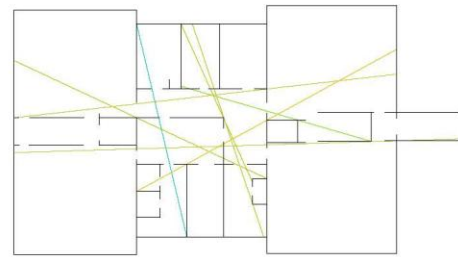
Main Floor



Off Gym

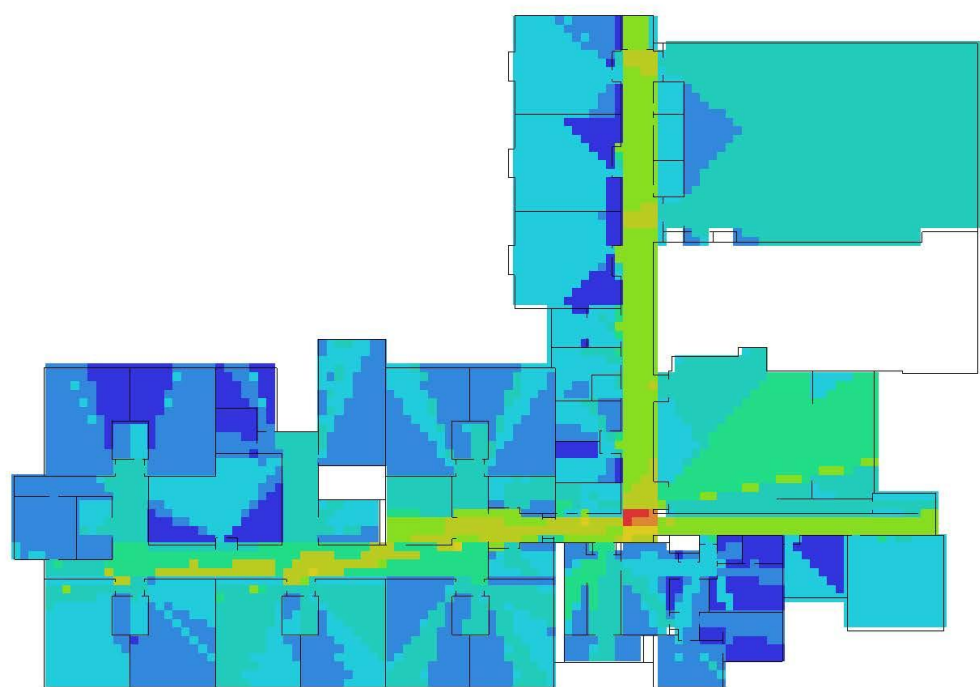


Bottom Floor

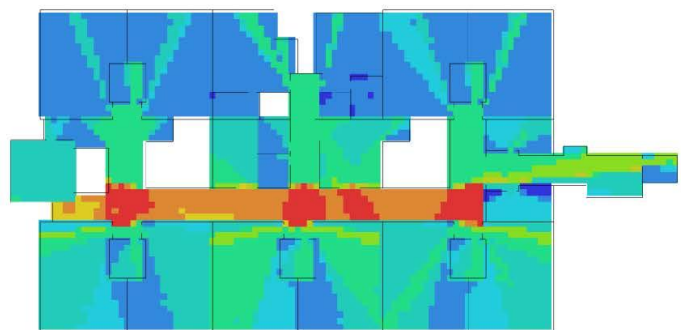


Top Floor

School B Visual Integration Maps

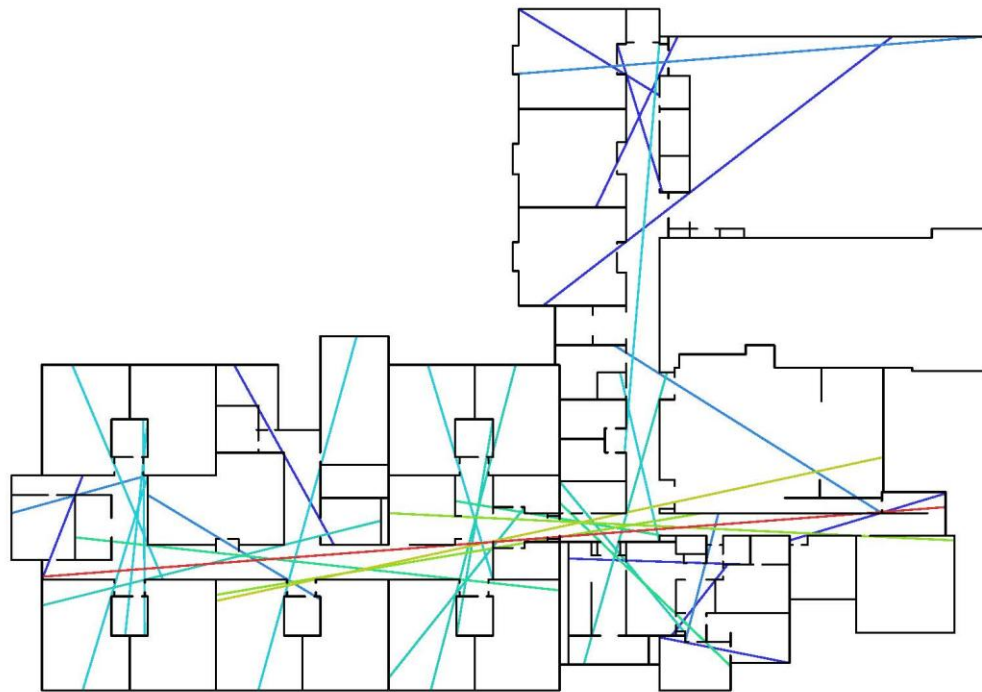


First Floor

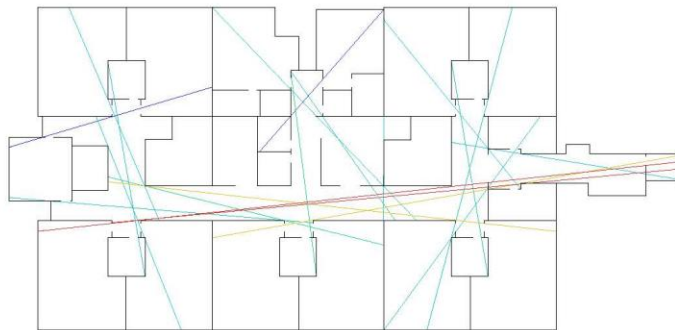


Second Floor

School B Axial Maps

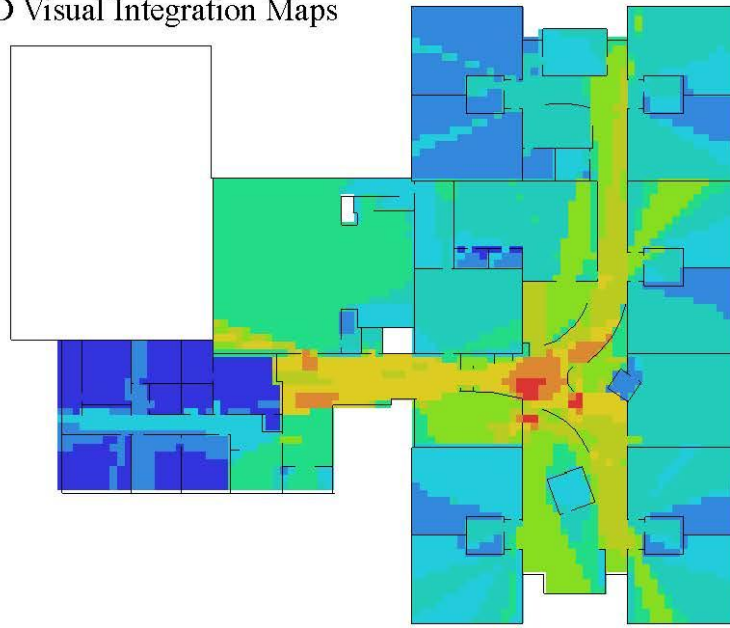


First Floor

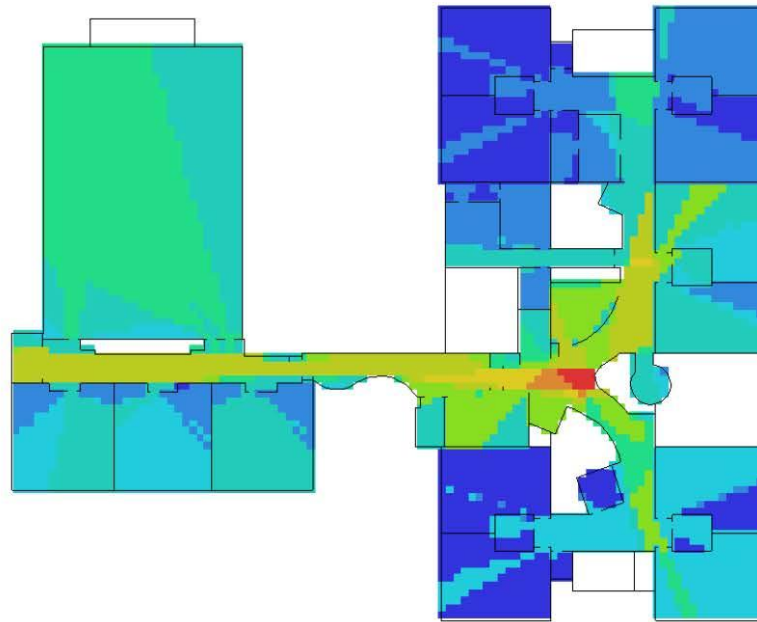


Second Floor

School D Visual Integration Maps

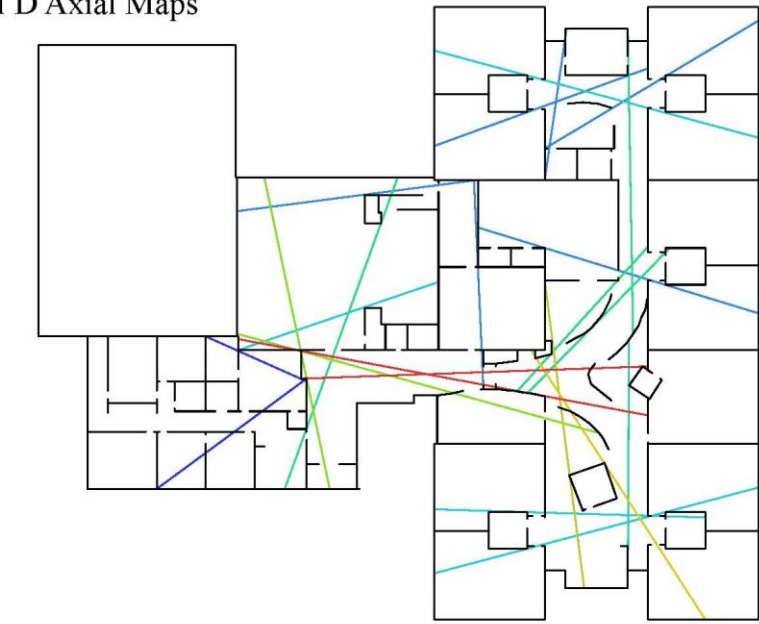


First Floor

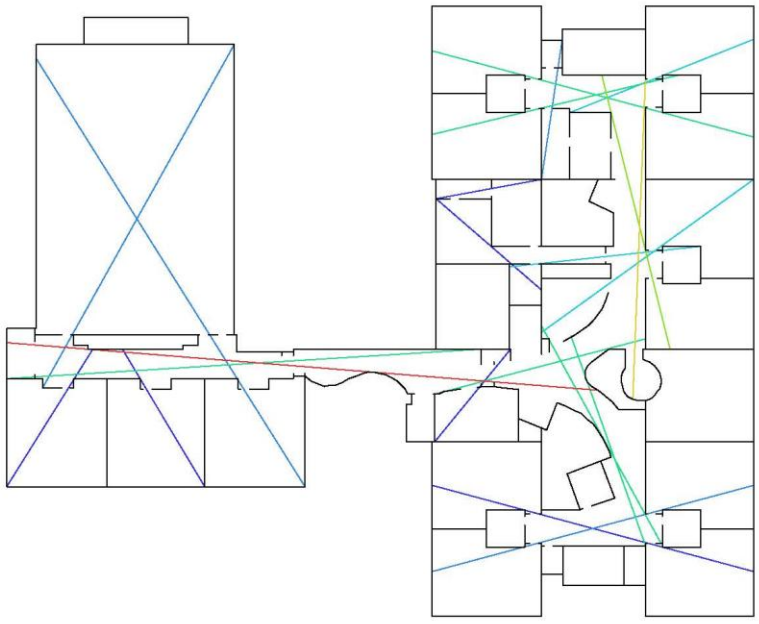


Second Floor

School D Axial Maps



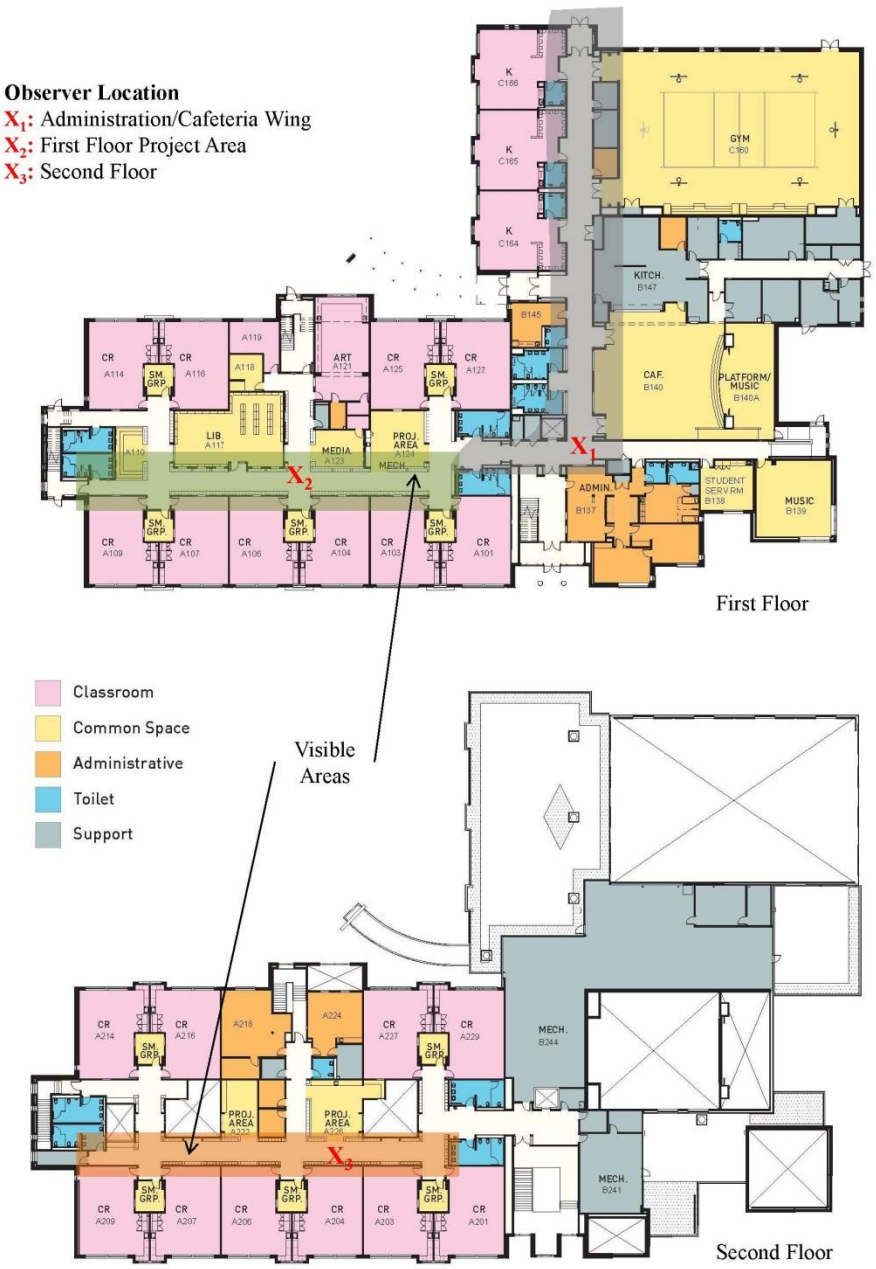
First Floor



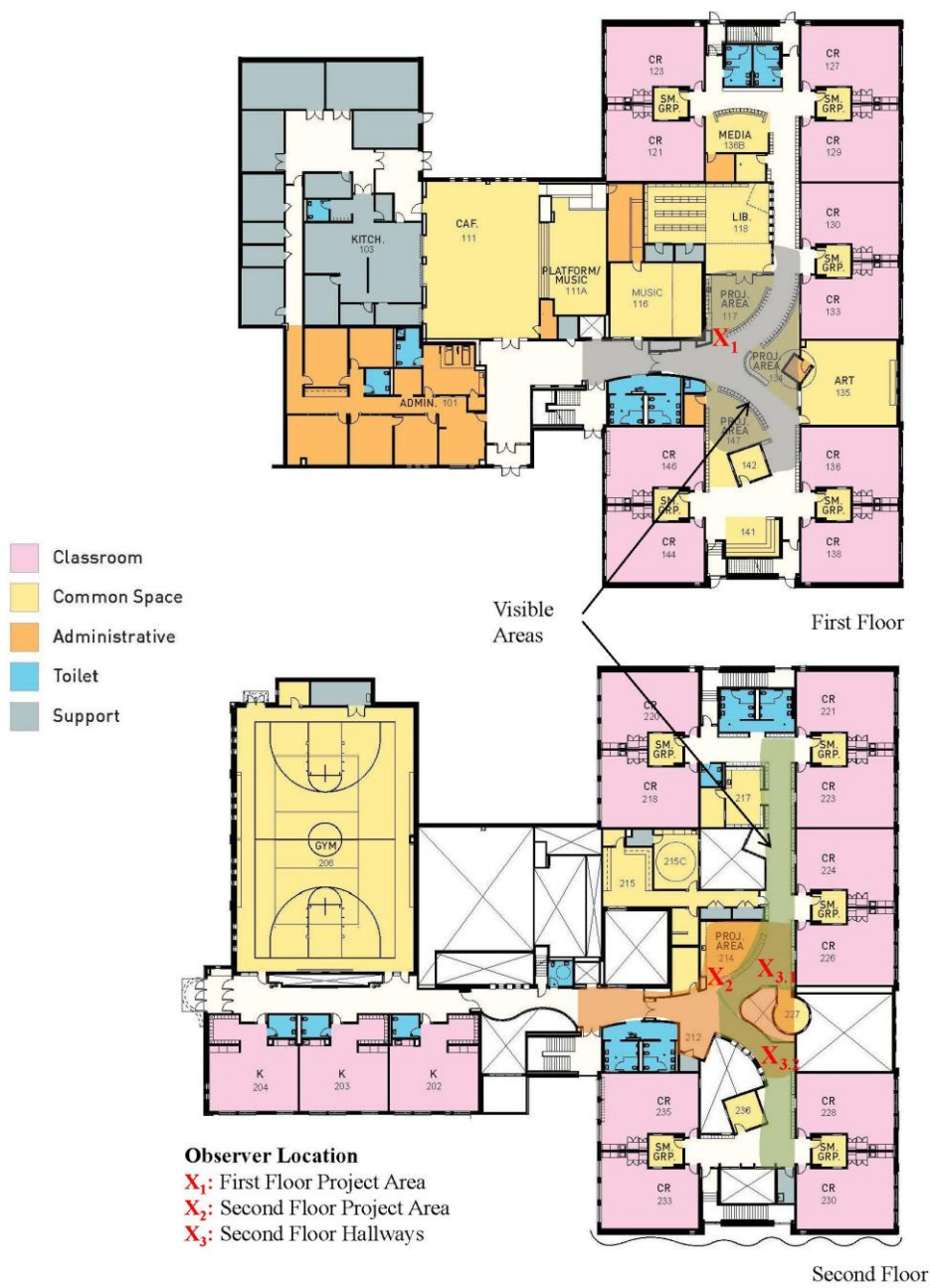
Second Floor

Appendix F: Observation Location Maps

School B Observation Locations



School D Observation Locations



Appendix G: Focus Group/Interview Transcripts

Focus Group, School A→B, Spring 2012

T: it echoes more I would say, I feel like you can hear kids way down the hallway...

There's more open spaces too here than [REDACTED]

R: How often do you feel you're able to just see teachers at [REDACTED]?

T: See them or talk to them? (laughing)

R: see and talk, so separate those out so how often did you see them and how often did you talk to them?

T: I feel we're more isolated now,

[REDACTED] and I were wayyy in the 5th grade wing, [REDACTED] was in the 2/3rd grade so to speak wing, so we were like way, way from our civilization so to speak. This is K, 1, 2, 3 basically. We were up with the upper class kids/people so we were way, way from everything. I feel like it's better here --

--you do?

--that's just how I feel.

R: Yea, I've noticed that pattern; the reaction to this building greatly depends on where you were at the previous building. Some think it's better, some think it's worse so it's kind of an interesting...like where you specifically are located compared to the people you more need to communicate with. So is it true that like you mainly only need to collaborate with those that are in your same grade level or group or is that not the case?

T: I think that's for more of the collaboration, yea, yea

---and special ed as I look at you

--There isn't a lot of collaboration time though, so, we only have that during project time or something. So we don't really see, in passing we all see each other you know

--- Unless you make a point to go talk to somebody about something, but that's because of academics, not because of the building

-- So you really are secluded from each other. And even [REDACTED] and I are right across from...

--we're the same grade, yea

--we have the breakout room between us and we're right next to each other and we still don't even...unless we're going out to talk to each other or something but, we don't really see each other that much

R: so the seclusion is here, not at the old school, or not at [REDACTED]?

T: yea...

--I kind of feel more secluded here

--yea I kind of do to, I kind of like the space here better but I definitely feel more secluded.

--I like all the possibilities. I don't feel we've explored them totally yet.

--Right, I don't think we're using them to their fullest.

R: I think that's a common trend in this situation because people just don't know how to use the space so that's kind of like what my, where I want to fit when I graduate is helping schools like you learnt to use facilities better. I think it's important/I think in five years you'll pry have figured it out but maybe then it would be different. So that's why we're waiting til the spring to do the full data collection here is hoping that maybe you've learned to use the space a little better.

T: and I don't think we've really been taught how to collaborate effectively

--oh yea that's true

--that's a good point!

--there's a lot that's just assumed, like we're supposed to just know how to do it

--that's another issue too, we don't do a whole...I feel like when we talk we're bouncing ideas of about curriculum but in terms of collaborating and working together and teaching together, we don't, we don't do that

--no we do that on professional development days or something, they don't, we don't have any time for that stuff and the space doesn't really allow for it

R: there's no knowledge sharing going on, on a regular basis?

T: no, more in passing I would say. We find each other; we have to come find each other pretty much

--or discuss at lunch

---yea, that's true! Which is our free time so to speak. I think you're trying to say how we could utilize it better in the regular space of the day

R: right, well it's also, right, exactly and I'm also wondering if the stuff you are discussing here was the [REDACTED] which would mean it's more a cultural issue rather than a spatial issue

T: Yea, I think it's more of a cultural

--yea

--than collaboration

R: what about just like, social, being social with other teachers, regardless form your classroom it's important to have relationship. Was it easier to maintain those at [REDACTED] or here and why?

T: ummm I'm pretty social

--you had your Friday afternoon spot last week

--we did! Yes we did! Last Friday we just sat in the middle and teachers would just sit down and shoot the breeze and that, that was kind of like the first

--they call those "project areas"

--yea, yea

---And I think yea, having that open space that we never had at [REDACTED] - that's great

--I think it's great

--and if we take the initiative to sit down and try it but it's not only that but a lot of grades will sign out an area and so that's like, totally. I don't even know if they're signing it out but it's totally utilized by that grade so you don't even have that chance to collaborate even if you wanted it.

R: so that the design provided for open spaces for the students but not necessarily for the teachers

T: but it's kind of nice, last Friday anyone that walked by was like "oh!"

--yea it was kind of nice

--yea it was after school

--during school, and I can just tell you cause I'm the assistant, my kiddos fall down and scream

--yea

--like loud, for a long period of time and there's almost so much I can do by law to move them. So, the people that are using the breakout rooms are having a pretty tough time with that. And I'm trying to, we're trying to be mindful of that but if it's a bad day, it's a bad day

-- You mean like the sound and everything? The distraction and disruption?

-- Yea it's loud, it's loud. [REDACTED] knows

--what if the door was closed though? They still have an issue with that?

--oh it's, it penetrates. It happens in the hallway

--it's not anybody's fault, just the way it is

--oh I know

--if it's in the breakout, but we're talking about the breakout areas

-- I can hear it in mine; I hear it down in my room sometimes

-- she can hear so if you're talking the breakout rooms and they're doing lessons right now, the title 1 is pulling out and using the breakout rooms and it is so disruptive.

-- Can I tell you about....I don't know if this is pertinent, when I taught at [REDACTED] schools, we had a...two schools ago we had a um, a snack time where all the teachers got a 15 minute break while the kids ate snack and the paraprofessionals would watch the classrooms and we would go to the cafeteria and we would have coffee and chit chat and that was the most---

--productive

--bonding time we've ever had. We were such, we were like a family. We were, we knew about each other's kids and parents and what's going on in their lives and we knew about families in the [REDACTED] school that were having trouble and we were, were tight them, we were really, really tight and then, some law came down or to the superintendent's office that it wasn't fair that we had this time because not all the other schools had this time and we couldn't do it anymore and we felt a really lose because we didn't have that time to bond anymore and it was a significant change. You remember that [REDACTED]?

[00:07:38.26] -- yea, the difference though with [REDACTED] because I taught there too, was we had a student body of like 125 worth versus 500.

--true, true

--yea but it was, that 15 minutes was the more productive time

--you'd have to blog paris?? To do that though, for us now

--It's probably not --

--We you had it like, 8 people you know, or 5

--I don't know...but that was just a model that was great

R: so if there was some way to do something similar to that or...

T: yea, yea, it's smart

--and you know, it, it effected our teaching. I think we were better because supported and we felt connected and we felt, a part of a team or something

--that's pretty powerful

--that sounds nice

-- It was...very powerful

-- gets me also thinking about space, like, we can't go backwards and change anything, you know, but are you also wondering about size and stuff to?

R: right, yea! Anything

T: so in the hallways when those kids have like say, when the kid falls on the floor and have an upset.....(unintelligible)

R: here you do, yea?

T: mmhmm, you think they were pretty narrow at [REDACTED] but and they really, the school is really nice here but if it wider and a kid had a freak out session, you could still walk down there.

--oh the other thing - I think this is more of a staff thing, I probably don't even need to tell you this but we didn't really have any say....downstairs is the only staff bathroom

R: yea, I noticed that!

T: so we have up here, is the bathroom that um, a couple special ed students, whatever share, and a lot of us will have to use it because we're up here. We'll have other teachers who really are brave and they go in the boys and girls room which I would never, ever do and um, a lot of teachers go into the regular bathroom. I dunno, but it's weird because you're sharing with someone who needs a stool, you got a different seat. I mean, the only staff bathroom we have is downstairs. Yea, we should have a bathroom up there!

R: and was that not an issue here [REDACTED]

T: no because there was a staff bathroom here, there was a staff bathroom down here

--yea that's my biggest complaint is the bathroom

--yea I was just telling her how we have to share the one up here with some students and downstairs is the only staff bathroom. I was also saying that the hallways could be wider because when the kids have those freakout sessions you can't even get around them, you get two lines of kids you know but that's stuff you can't really change too easily but it sounds like you want to know about it

R: right, no, I think everything works as a system so you can't just point to one thing so I think all those different things---

T: and we all have different views, so...

--is this like action research? Because I did something like this for my program. Like action research where you implement something and you're trying to make a change?

R: no, well, I'm doing, we're just doing a before and after case study so that's why we're looking at [REDACTED] and then we're looking at [REDACTED] and I'm also doing the same at [REDACTED] and [REDACTED] so we're going to have two different cases

T: will we get the information? Cause I think it will be... I think [REDACTED] will be interested too as well as [REDACTED]

--oh we would get to find out about those too?

R: yea, it's all one; it's all my thesis so it'll all be kind of in there

T: good!

Cool!

(chit chat - new teachers coming in)

R: so basically what we've been talking about it teacher communication patterns at [REDACTED] and I'll be back in the spring to do kind of, really thorough data (unintelligible) but basically what we're talking bout is what worked at [REDACTED] in regards to communication both, mainly from a spatial aspect but also if anything organization wise or culture wise has changed, what impact that has had and just, you know, what you missed from [REDACTED] or what you're glad is gone and just getting a really good picture of what your daily communication was with other teachers last year

T: I think...I wasn't going to fill one out, but I think...do you want to hear from people who aren't teachers?

R: yea, anyone that's used the space is super helpful!

T: we don't see see each other anymore...at all.

---well we've been saying, we're all secluded

---um, yea, we really are, we don't necessarily, I feel like 4th grade doesn't necessarily know what 5th grade is doing and 3rd grade doesn't necessarily know what...because we're all in a very specific section of the school and there are Para's that I don't see for days and they say, oh! Were you even here today? [00:13:06.01] cause it is so big, the communication in that aspect, is lacking I feel. There are a lot of good things about being here, bundled, and that kind of thing, cause it's a good surprise when you see someone in the hallway (laughing)

--I would um, parrot that. I am a fourth grade teacher and in the past, to get to say the office, I would pass 5th grade rooms. I would pass 3rd grade rooms and when the doors were open; it's very easy to eavesdrop

--and open right out in the hall

--and open out into the hall

--yea

--so I always knew, that "oh! Okay, in 5th grade they're doing decimals and we're doing decimals but they're taking it out to this step, not a clue this year--

--do you think it's because the doors are not right in the hallway? So it's not as welcoming? Could it be?

-- Yea they go like that (hand motion)

--well and I, I know that I, when I walk by just like, it's fore of habit. I'm just nosy, I look in everyone's windows but a lot of people have their blinds down so you can't see

--or they have the big cabinets in front of their window

--I thought we weren't supposed to obstruct the window. If you walk past my class, because I'm right there on the hall and they think more people tend to pass me upstairs, if you're going down

-- Yea, everybody's going that way

---staircase when you're coming up, I think you see into my room more readily than you can some of the others

--and in that same regard, where are people supposed to put = like I don't have my cabinet in from of my window but I've pulled my blinds because I'm tired of seeing all the girls, all the things they do in the bathroom, talking, and doing things they're not supposed to do. I'm tired of being the one that has to bring that to [REDACTED]'s attention all the time [00:15:00.29] I don't want to have to do that every day anymore so I've close my blinds because I'm like a detective with that crap but then at the same time, if you put the cabinets in front of the windows, we don't have a big enough space for people, for stuff. They gave us like these huge rolling carts that are like 7 feet tall and, I remember, I told [REDACTED], take one of them because there's not space for it. They have all this stuff they want us to put in our rooms but there's not enough room. Then the desks that we got are great cause the chairs stack on top like I wanted but the shape of the desks aren't right for our space.

R: yea, cause that's also interesting too, just to kind of, cause I noticed that each teacher had the desks arranged in different ways. Is that helpful?

T: different ways, yea...

--I've changed it four or five times

--I think we've had to because everybody's got a different style

R: I think that was probably the intent behind that decision.

T: but if they were square and they didn't have wire area for you to put your stuff in and everything falls out. If they were just wooden desks we could do a lot more with them but they, they're shaped like, shaped to like connect them like a puzzle.

--so you can't make good pairing

--I mean you can, it's just really hard

--they don't fit, right? They're thicker...

--yea you have to have one kids who's back is a little bit turned to the board, it's just tricky

R: So I missed a little about what you were discussing about, what were you being a detective about with being able to see in and out?

T: yea, just always having to watch, cause the girls room is right there. and I remember....even if

---it's like at dinner time you get sat, if you sit next to the bathrooms, it's like, no, we don't want to sit there, give us another table

---yea, even a Para said to me, they were walking out of the bathroom and they go "so I know you can tell when I wash my hands!" and that makes me feel weird. Like knowing I'm watching someone wash their hands. So I pulled the blinds and like I said, I'm having to constantly watch girls who are right there at the sink following around and you become like the detective

---distracting

--and those aren't my kids, these are upper kids or whatever, upper grade kids

R: so those are issues that just weren't even a concern at [REDACTED] just because it was so much---or where there

T: oh there was a lot of bathroom issues---

R: bathroom issues, but you didn't have that visibility or that constant connection

T: right, because [REDACTED] and I were on the other side while the classrooms....but yeah you couldn't just see in

R: so were there any issues like, communication, or anything like that at [REDACTED] that maybe don't exist here that were improved?

T: I bet I know what they're going to say at [REDACTED]. You say you're doing [REDACTED]?

R: yea

T: they don't have phones!

-- Yea I used to work at [REDACTED]. ummm, I don't know. Like anything at all?

R: yea, just like the space, I'm very interested in just the systems point of view so if you, if this is helpful to look at floor plans of [REDACTED] to kind of help spur any thoughts. So well, overall I'd like to talk about [REDACTED]'s space and communication but also just anything that the space helped or hindered whether it be communication or otherwise.

T: well, we only had one teacher's room so therefore all the teacher's congregated in one part. We don't see - except you [REDACTED], and [REDACTED], we don't see anybody from downstairs for lunch. [00:18:37.25]

--yea and, but it is nice having two separate spaces but in the same regard yea, there's people that

sometimes eat down there by themselves and we don't even know it

--yea

--One of the things that we had in our other space also was one workroom

--yea, a separate

--oh yea

--so you saw everybody there

--and it was not a part of the teacher's room/

R: right, yea, they were connected though, correct?

T: yea, they were connected.

R: did you notice a difference in the types of communications/interactions that occurred in the workroom and then in the teacher's room?

T: mmhmm

R: so what did those look like? What would communication would occur in the teacher's room and what would occur in the workroom?

T: in that the teachers' room was more private, is that what you're....

--yea

--well, we closed the door at times

--yea, like the workroom always had the door open on the other, on one of the sides and the door from the lunchroom, from the cafe, from the staff lounge to the workroom was always, usually closed so I think people felt more comfortable with the door separating that

--so it's separated

(chit chat)

T: for two years, this was my space.

R: the [REDACTED]?

T: yea

--how did you feel about connecting with people?

R: yea

T: well she loved ---

--she loved not connecting

---she loved her bathroom, she had a bathroom in that room

--it was nice!

--I'm actually more isolated now than I was two years in the [REDACTED]...because we had to come into the main building for specials. I came into the main building for lunch. I didn't have to use the bathroom in the main building but I came into the main building all the time so I connected with people that way. I would pass, I would frequently come into the cafeteria and I hardly ever see [REDACTED] this year (lunch lady) I never seen [REDACTED], I never see [REDACTED]. So if you had an issue with your classroom you were always passing the janitor's room, you were always going through the cafeteria.

--but you also had an adjoined...she had an adjoining set up to was that Title 1? So there was a whole other section of the [REDACTED] that was title 1 and that's like 7 people or something?

--mmhmm

--yea, you had more interaction there cause you had more civilization around you then (laughing)

--yea

R: that's interesting, so now, where are you located?

T: I'm on the second floor, down the hall

---and I would say that was a pretty, if you were going to get central that's probably it, don't you think? I mean, that's

-- I mean, whoever walks by can look in

--but they can't!

--we can't, you're right

--we don't, you don't walk by their doors, you walk by their window. You have to veer off from the hallway to get into any classroom now. You don't walk by doors [00:22:06.14]

R: so we're talking about [REDACTED] and kind of comparing a little to here but mainly looking at the communication patterns that would occur there and how the space helped or hindered

T: well it was really hard to have a vice principal at [REDACTED] (laughing...he was in the room)

-- And staff meetings were also held in the [REDACTED] for privacy issues so everybody always came into my space. That's the only time you guys ever came.

-- was that negative or...?

--no, not really cause you didn't feel secluded even if it was technically secluded

-- I was going to say something about the fact that everybody after lunch or going to recess or I mean, you were constantly walking back to the library, that open concept library and how that was, I think that was certainly a challenge, for at least [REDACTED] and [REDACTED] but now, the people that do utilize the breakout spaces, the project areas, they may be feeling the same way, I don't really know

R: and that constant interaction in the library, what are the pros and cons of that you saw? Like having to walk by that?

T: What is the question?

R: well, we're discussing, in general, the question is [REDACTED] and that communication that occurred there in regards to the space and in general. And so right now we were discussing the area around the library and walking from that

T: I don't go down there

---no, the pros and cons, I was saying that at [REDACTED] you were always having to walk by the library. I think a con for the library is that it was right next to the lunchroom. I mean, it was loud, a lot. I don't, and this is not anything about anything but I don't know if there was necessarily a pro to having it be open concept on that side...I mean did it make you want to go to the library more?

--I do, I mean you could get to where you needed to get to quickly and you saw people there, you saw people

--it was centrally located

--You saw people

--it was centrally located that was

-- You passed by a lot of people on that one hallway

--yes, it's true

--quick little conversations would happen!

R: so that was kind of a hot spot then, that hallway?

T: the whole cafeteria, library, ramp area. That was perhaps a route for a lot of people

--can I actually just say something. I have to bring my kids to class but....um, I was looking at the, as I was walking up the stairs, those little, the little areas they have for the students, the little mini areas

--the breakout rooms

--no they're not really breakout rooms, but yea, I guess you could call them break out rooms. I feel like there's a lot of like, cause it goes often unsupervised cause the kids kind of can go up there and be expected to do a lot of off task behavior because of those little spots, know what I mean?

-- And they have those dividers...

--yeah and then the divider kind of hides them even more so...just something I wanted to add..

R: thank you!

(chit chat about food)

T: um, one of the things that I do in my position is that, sometimes I need someone quick as I'm running down the hall and at [REDACTED], you could literally say, I need you now, or "can you go get this cause I can't leave where I am?" you feel like there's more flexibility as far as, hey, I need to run to the bathroom, can you just come in here, whereas, you don't see people, you have to send out a message.

---SOS

--and if you don't have anybody working in your room, which I don't

-- I don't either, I just go, leave em!

--I never leave my room, yea

--I just leave them, whatever.

--you guys are in charge

--you're right though, there used to be somebody you could,

--automatically

--you could call and like can you me, can you help me?

R: so now it's just that you can't see them? you don't know where they are?

T: nobody can see anybody. nobody walks by

R: so where would um, something I got from our conversation earlier is where you would send your students to work and how that impacted like, when you go check on them you see other teachers like if you send students to the cafeteria you then have another opportunity to like, move out of your classroom and interact with other teachers. Do yall have any experience with that at [REDACTED]?

T: there wasn't anywhere to send the kids, I felt. but I still don't think there's anywhere to send them

--- I, I would maybe send them to the library but no, it wasn't really an opportunity to chat but I don't think there's a good place to send them now either, where they're supervised. It's supervision. I don't send my kinds to any of these learning commons area because they're not supervised.

R: so the windows aren't helping you be able to

T: well, my window is nowhere near it...my classroom is not near the breakout areas. and my classroom doesn't have a window

--and I will send mine to breakout areas but I feel that I'm closer to a breakout area and it's easier for me to check and I also have somebody in my room. so, and this morning, you were in one of the breakout areas with two guys and then I had some others working in there and I did go out and just check. But I'm close enough to be able to do that and she doesn't have that.

R: so it seems pretty clear, just from my various discussions, that there is a lack of this interaction and the spontaneity. And what kind of benefits did you see from having that?

T: a sense of community...and it's like oh! the aggravations that I'm having with this child you had when they were in first grade, you had when they were in second grade and I think I connect with those teachers only outside at the end of the day.

-- this building, the other place felt like a school. This place feels like a workplace. [00:28:52.23] It has a different feel. It feels like I come here to work, it doesn't have the school community feeling yet. and hopefully it will come along but it doesn't feel like that right now.

-- definitely more isolation. It's like we're all in our little compartments more, than, more than even before.

-- It's interesting because when I first started in this building I kept saying "it's just not home, it's just not home" and I thought maybe I was just done being a Para, you know, like I just maybe I didn't

connect anymore but I'm glad to know that

-- no it has a completely different feeling to it

R: do you think there's anything that can be changed with the culture to help that with this space? Is that an issue or is it strictly just the new design?

T: I think it's probably the new design....

---there are little differences; we had a coffee maker last year. I don't drink coffee but this wonderful person put table cloths on the tables, curtains, you know. It was a home.

--You got table cloths on the tables

--oh so, these are just spectacular haha no but you know what I'm saying. It was just a comforting place

--do you want curtains on the windows? I can put curtains on those windows

--yea, I just want home you know and maybe that will come. It felt like home because we adapted and we adapted it over years and years and years I'm assuming

--I think it is also just like the size and the layout. There are always going to be people that I don't see. I used to see everyone in the school in a day. Now, like you said, I could go a week without seeing the second grade teachers. If I didn't see them outside at the end of the day. I don't see them...

-- I saw them once the other day and I was like---

-- we used to have to walk by all their rooms and we don't

-- yea

-- there's so many different stairwells too

R: yea, I've gotten a couple time

T: there's so many different stairwells that there isn't one path. At [REDACTED] there was really one path. Here, there are so many different walking paths that everybody's going in different directions that you don't even have to cross each other in that path.

--I don't know how it affects things but I think it's a big difference to not have the mailboxes in the teachers' room too. I think because everyone had to go there for something. Even if you didn't eat in the teachers room you still got your mail in the teachers room, you know there was always something and I don't know if that's a pro or con of if it even matters but

R: so those were in the teachers' room at [REDACTED]? so it was just another incentive

T: they were yea, and now they're in like the, more the office, you know

-- and where the first grade teachers eat lunch

-- I think they eat in their rooms -- I don't know, I think they eat in their rooms

-- where's second grade?

-- Some of second grade, they eat out in the common area. [REDACTED] comes up here though.

-- right, and some eat in the common area

-- but she's learned

--the common area downstairs

-- some people eat in the little teacher's room outside the cafeteria.

R: and are these people that last year would eat in the teacher's room?

T: yea, everybody ate in the teachers' room

-- cause there was only one teachers' room

--there wasn't even enough room. I mean, you were standing up to let....

--when you think about it, we have three tables in here; we had three tables in the other ones.

-- yea we had basically the same

-- and you had to plan, like okay, if I'm 3 minutes early there won't be a seat.

R: and is the schedule the same? do you have lunches at the same time as last year?

T: mmhmm

R: so that's not a reason...interesting.

T: there's a lot more places

R: yea, it's one of those unintended consequences of providing flexibility is that even...you see people scatter.

T: Pat, where does second grade teachers eat their lunch and first grade teachers eat their lunch?

-- um, I don't know where [REDACTED] eats. I think that they're down. she's not in her room so I think they're down there.

-- we're just curious

-- who's the second grade teachers I think...eat up here.

-- they eat up here?

-- [REDACTED], she's, she's third grade isn't she [REDACTED]?

-- she's second grade

-- they eat up here but [REDACTED] does not eat up here, [REDACTED] eats in her room.

-- It's kind of scattered, I the other grades all eat up here and the lower grades eat down there.

(different side convo)

-- I would say I see her more

--because you were in the [REDACTED]?

-- because I'm in the building now so I see her more

--- she'll walk the halls, she does her job well because she's not that central spot anymore but she's still walking around, she's still very present ()

R: right, I think I've seen her in different places since I've been here today, just going back and forth. This is really interesting in how different it's turning out than what the architect's intent was because I know they intended it to be like a hub, a communication filled space.

T: but how?

R: well I think from a design perspective it sounds great, you know, there's visibility between classrooms, there's break out areas so you can always see what kids are doing inside and that's what I'll be looking at next year, next semester is how much they're actually used, who uses them, that sort of thing. So now, I'm getting a picture of () but I think I have a pretty good view. You know, it was a traditional style school, it was older but it still had a lot of good attributes.

T I would be interested in seeing what people say in three years

R: exactly and that's one of the things my advisor is looking to do is making this a longitudinal study and looking back in a couple of years

T: because I already know people are still sour that they have those memories (unintelligible) I loved ()...I think there are a lot of good things with this but I think we are all.... I dread having to go downstairs. mean, you know what I mean (unintelligible)

R: more work to get around

T: yea that should be interesting because at () they didn't have phones. They'd have to go alllll the way upstairs to (unintelligible) alllll the way downstairs. That was always crazy to me.

R: Interesting, I didn't know about the phone thing.

T: I'm a fifth grade teacher, the others all eat in their room ()....I mean I came from (). Which did not look perfect....we didn't care what it looked like but we all had such a great staff and we were really close and people had a lot of fun. A lot of, you know, a lot of fun teaching the kids...it wasn't all about the seriousness of the academics.

Focus Group, School A→B, Spring 2013

R: but I guess overall, how, how would you describe the communication patterns here and like how you, and especially informal communication, and like your relationship with teachers and that sort of thing

T: I'm having a real hard time with it just because of the location where I am in the music room and just, I mean, days can go by and I don't even see () You know, upstairs way in the back and stuff and so, and it's not that I can't get to her if I really need to but I also, I feel badly even calling your phone and disrupting you. I feel like...rather than me chunking up the stairs, I mean it's nice that we do have those phones but I feel like I'm intruding on your class.

T: It's true because sometime you, in the past you would you just uh, you know, stick your head in the door and it would be like "somebody's forgotten their lesson" where now it's just the phone call, it's just too far for you to really come and....

R: so each teacher has a phone they'll use

T: each room has a phone but I do feel it's...intrusive and so, it's hard for me to get ahold of my people and you know, that's how I feel. Just a long, long way to go!

T: and I think it's interesting because really last year at [REDACTED] we were in a separate building with an gymnasium and music together and you'd think then you would have felt separated but it's true, as far as I'm concerned over there what you're saying now.

R: so from the library, you're the, you work in the library. From your perspective, how...cause you're kind of central, have a lot of visibility

T: um...I don't really have anything to compare it to but I think so far it's been great. A lot of people will drop in um, to come and talk about things or if they're in there with their kids anyway, um, books and things like that we can kind of have those impromptu, unplanned conversations but I also find where I travel throughout the building as part of my job. I have all, I have a lot of hallway conversations too as I see people but I have that um, ability to be mobile all day um and go around so I probably have more opportunity it sounds like than others to communicate with people

T: you said because of your schedule

T: yes, the schedule and the type of job that it is. I'm usually popping in different places throughout the day um, and actually...it's funny that you mentioned the visibility but even today, [REDACTED] and I, you just kind of wave...I just tell people on the second floor just put a help sign on the window and I'll help you! Come up...but I think, as far as the library goes, kind of having that kind of openness, and the windows people can see if we're there or if something is going on they can either call or stop in or you know, talk to us so...

R: what are yall's thoughts on the windows in the classrooms?

T: I'm not...I don't really think about it. I'm used to it now so it's, it doesn't really make a difference to me one way or the other. But one thing that I have started to do is have my reading groups outside the room so that I can look in and so while we're having you know, a conversations about the book that we're reading, inside the room it's a quiet workspace or that's the plan...it doesn't always work that way but that's the plan. That I can kind of watch what's going on in there while still having our reading group so I like that...

R: and do you have plan to do something...?

T: I mean, I have a window in my door, I have the porthole. The porthole and then a side window. And I have OT and PT and QRSTV next to me you know, so sometimes when they're in the hall it's a little distracting you know, they'll be on scooters and stuff like that and say, bang into my door and um, as far as the window's concerned, I don't, I'm...for the most part it's not a problem because of the location where I have my kids. Where they're seated so they're not looking out and because they're on the floor these type of windows, you know, there's no problem there either because they can see what going on outside

R: I know talking to the architects briefly, they wanted the kids to look at them because they thought it'd be this good kind of distraction

T: well even looking at the floor plan, I mean, we're talkin about your room and the location. I mean it really is off by itself I think in that, in that corner and I think if it had just been moved over to this other side I think that probably would have made a big difference

T: I think initially it was going to be but then it got changed

T: because even, even there's no one across but it's the cafeteria. There's no one really next to you where people are coming in and out or whatever but if almost if the admin office and music had just switched places or like where they made the art room here maybe putting you across the hall instead of guidance and having you both, you guys here and the putting guidance maybe over, I dunno but it's just, now that you mentioned that and now that I'm looking at this it makes a lot of sense

T: yes and even when we had talked about the specials, you know, cooperating....we don't! I, I really have to go out of my way to go see Bill and then the same thing with...

T: yea! Because the three of you are like a triangle..

T: yea and when we had the literacy arts stuff and that was supposed to fly and then it, that's hasn't...I feel, I feel isolated where I am by the...yea. I mean I love my room. Oh I love my room! But I do, I feel isolated from the teachers and I, I make a point to come up here. I scurry up, you know I have a ten minute lunch and I just run up here because I want to connect with a few of the teachers that eat up here

R: yea and I saw you walking around a ton and is that out of necessity or just because you want to

T: no it is out of necessity, yea...

R: now I know you're secluded (to other teacher) so maybe you could speak to this, but one of the goals of the windows was also the, when you're a teacher and you see someone you want to talk to out in the hallway you can see them and then you go – has that ever happened?

T; um...it has happened from time to time, I can't think of a specific time off the top of my head but yes, we'll uh, maybe we'll see Josh my teaching partner or perhaps I would see [REDACTED] or Mrs. [REDACTED] in the hallway and say, oh I have a tech question that I was going to see them about. Ms. [REDACTED] by....she's be walking by and I'll touch base with her. Um, it doesn't happen very frequently though I would say. Um....but also, and you might, not sure go into this question. The windows work the other way to of course where today I had kids who had not completed an assignment I'd given and so....a few of you go to the breakout room, a few of you can work in partners at the table, a couple of you can go work at the other work station so I had them all spread out and could keep my eye on everybody just to make sure things were under control so...in that way it works well too although oftentimes those areas are scheduled for title 1 services or um speech or something else so we can't always do that but um, oftentimes you can which makes it nice.

R: so what is your, I guess favorite thing about the new building in regards to your relations with other teachers? (silence) because I know most of it has not been positive so are there positive things (laughing then more silence) and that's fine if they're not...

T: I love it, I love the building that it's new and clean and that sort of thing...I'm just having a hard time really communicating with the teachers. I really am.

T: I think that's one thing that's been surprising to me is that I didn't expect it to be less conducive to communication um, but I feel that it has been and perhaps (1000) and I don't think it's just me because I've heard teachers say the same thing but I am way back here in the second floor corner and you really don't see anybody um, like fourth grader I'll see at lunch if I come into the lunchroom otherwise I can go all day and never see a fourth grade teacher, never see a third grade teacher, only see another fifth grade teacher when we go out to recess. So that is kind of surprising to me that it's less conducive to communication than I expected.

T: but I think part of that too, it seems, from my perspective that, and it might just be the design of the building, but some grade levels were put all together and then some there's some separation even by a floor and I think you know, with fifth grade you've got two here but the third one is down the hall and you've got um, two of the third grades up here but there's another third grade downstairs. So I think placement of people to, um, can feed into the communication, you know.

T: right

T: if you're doors are right there and you're close you can have that kind of hallway quick communication but you can't leave and go downstairs to talk to the other third grade teacher if something's come up or...

T: and even our title 1 services, Mrs. [REDACTED] is in the breakout room between [REDACTED] and I and Mrs. [REDACTED] and um, Mrs. [REDACTED] are in different rooms. I'm not even sure which rooms they're in they just come and take my children and work with them and then bring them back so I have a lot more communication with Mrs. [REDACTED] regarding where my kids are what they're doing than I do with the other two title 1 teachers that work with my children. So...that's another piece. Um, Ms. [REDACTED], the special educator is here and around the corner. She used to right across the hall so I know that I'm just being really...having to walk a few more steps to seek her out during the day but we used to just, you know almost every transition just have a little feedback between the two of us and now I have to, you know, kind of leave my classroom to go and have communication with her um

T: yea cause I, I think the best set up for the first grade and the fourth grade because like they're almost considered kind of like a pod because their four classrooms are right, right there and so, you know I'm down on the first floor more but I often see the first grade teachers the kids are at the lockers the four of them are out there discussing and planning and I'm sure the same thing happens up here

T: no, no, not as much

T: no?

T: no, not as much

R: I noticed that today that the communication upstairs was much more quiet – do you have any idea why that may be?

T: the communication up here? I don't know...I mean our schedules are totally different in regards to when we have our specials and things like that but that would have been the same last year and well. Um, so I'm not sure why there would be less of that up here. I mean, I'm not sure why fourth grade because you do have that pod situation. With fifth grade you know, [REDACTED] and I are across from one other and then [REDACTED], Mrs. [REDACTED]'s down here so we really, even when our kids are getting ready at their lockers, [REDACTED] and I may be out in the hallway together but [REDACTED] is in a totally different location so

T: and I think part of it with fourth grade is my guys will only go to their lockers at lunch time to get their jackets and come spring when they're not using their jackets they won't go anymore and it would just be at the end of the day and...different snack schedules and...fourth grade teachers I don't, supervise locker areas as much

T: oh yea, perhaps

T: what about also with the—

T: also my kids out there—

T: by themselves—

T: I kind of limit, by the time mine go out; the others are pretty much done because it gets too noisy and too chaotic

T: and how about the distance between where you have the project area in between too because you and [REDACTED] probably communicate a little bit with the other two

T: a little bit more

T: a little bit more than the other two?

T: yea and you think you have so much to do in the classroom...

(unintelligible)

(silence)

R: so where do you spend the most time when you do have the chance to meet people where do you think that happens most in the school when you just see someone that you want to talk to?

T: I have to go to them

R: to their classroom?

T: that's what I do...once in a while I'll see someone in the hall but when I go to, go to their rooms to talk to them.

T: I communicate with...when there'd be other upstairs people here at lunch we overlap by a little bit with third grade and by a little bit more with fourth grade so when I come to lunch that when I usually communicate

T: we used to talk all the time last year

T: yea...

T: at lunch

T: no!

T: otherwise...

T: at other times! After school....but you're down there and I'm down here. But I was out at the [REDACTED] last year but when I...

T: when you had to come into the building which you did you had to pass by my room and we would have a conversation almost everyday

T: yes, yea

T: There were a couple of things....

T: I just share this....(unintelligible)

R: so when you talk about, kind of the pods, I'm trying to label floor plans so I know which teacher's where so here's the, here's the downstairs and some teachers have yall's names on it but not everyone so...

T: coming from the office, this is 1111.

R: Oh okay! So this is all first grade? Gotcha. And then....so what would be...

T and then sped and then 222 and then these are 3rd.

T: one a, ones a two

R: so that's a 2, that's a three, gotcha, so then upstairs there's one third grade

T: two third grade

R: two third grade and then these are the two fifths and then the other

R: okay...

T: yea that is interesting

R: and these are all fourth? And....thank you! And other than like, the physical space move, the schedules have all stayed the same at the new facility when compared to [REDACTED]. Like the lunches are all at the same and specials and everything.

T: um my special,...the specials....yup I have the first specials in the morning so that's all consistent and the lunchroom is the same time.

R: okay because I did notice, obviously you run into people more when you're transitioning so at least that should be the same but I guess you transition in different places I guess now. Do you think that the multiple stairways have

T: I was just going to mention that! Because even though it's at the same time, when you've got stairs here, stairs here, stairs there. I mean you try not to have too many kids going on one stairway and trying to coordinate that, that probably takes away some of that communication, communication in the halls

T: is that a safety issue though? Do they have to have stairs? Probably

T: mmhmm. Yea, yea

T: I think it's....we try to not be offended by this but fifth grade has been asked to use the farthest stairwell as quiet as we possibly can so as not to disturb...

T: I can't believe...exist

R: the one that's right next to you guys?

T: yes so we got out that way for recess now, we got that way in the morning

T: so that in itself segregates, separates you guys from everybody else anyways

T: yes, yes, it kind of makes us feel like...coming up the back stairs, sneak in to our rooms (laughing)

T: (unintelligible) it might have some moderate things to....just do what you want.

T: because um, another thing that it's lacking, it can be very loud um so when our kids are even just you know, getting ready for recess, even if they're not talking the lockers opening, closing, just that activity um, is distracting to the Title 1 area which is open and they're usually working with a class when we're going out to recess so, sometimes children still have to go to their lockers but we don't all parade by and go down these stairs, we'll go down our stairways and that way too

T: and I find that out downstairs where, for a while I was teaching in the um, on floor one down underneath art where it says "media" trying to teach in that, in that area, um, with the technology classes and even though people are trying to be quiet, but it's, it's surrounded by lockers, classrooms, and just the fact of the locker noise and you know, trying to keep the little ones quiet down there that, it can often get noisy and very distracting um, to do things in that area

T: when these are open also, I was taking my students down to the uh, what are we calling it, the amphitheater so I would take them down to do like a read a loud and second grade might be, or third grade might be having to get ready for lunch or even just children going to use the bathroom are walking by, are walking back and forth. It was just, the reason I finally went into the library was that first grade which is down at the opposite end of the building doesn't realize that when they come in, the lockers are opening and closing and there's chatting and it's so loud in the amphitheater and that noise just carries all the way down the hallway (21:33) so there were, it just happened too often that we had to wait for things to quiet down or there were just too many interruptions so now I just go into the library and even then today one of the kids pulled me to the door "can I close the door" because second grade was standing there getting ready to go to lunch and the sounds just seems to come in and amplify almost.

R: um, this is kind of a different topic um, because I'm look at also is how the organization can impact how you collaborate and communicate with other teachers so there's just a lot of different factors that all contribute and one of those that I'm really interested in is how involved in the process of designing the building you were to where it actually is what you want because...and maybe it was! Because on paper it looks like it would be great

T: you should ask [REDACTED] that!

T: I know! Cause she was on the planning committee

R: I guess I'd want to know how involved the teachers were, as a whole in regards to what you needed

T: as, as a music teacher, I, we had, I think it was a half a day where they actually got subs for us and we went over to the well, wherever the central office was at that time, it's been all over the place and I thought we were heard. I felt as though we were heard but nothing that I said came to fruition (23:05) You know, um, the fact that you know, we had that beautiful cafetorium and it won't even house the whole student body, you know, seems like it...yea we can't even get the whole student body in there! We have that stage and you know, it's, it's very unfortunate. So you know, I mean, I was all excited about this you know, wonderful new building and um, you know I was concerned of course, I'm always concerned about the noise that I make because my instruments can be very loud so...and I'll have to see when I do my drumming, African drumming class if in fact I'm not gonna be disturbing anybody. I'm hopeful that I won't, um...But as I said, you know I felt as though, you know, music teachers, we, we were collaborating within each other, the three of us, because of the three new buildings. But nope...I mean they got us out of school and they listened to us but what we asked for didn't happen.

R: were you also taken out of school?

T: I wasn't but we spent time at teacher's meetings, like developing lists of things that we wanted at the new school. Um, and we had [REDACTED] who was our representative for the faculty um, go to many many many of the planning meetings and um, and then at a certain point it was you know, thank you for your participation, we'll take it from here. And so there were a lot of surprises when we came here. Things that, and I'm even trying to think even of some of the things that we had asked for that, didn't come into play...I know one this was, we wanted a large central library because we had a large central library at [REDACTED] and I think they also asked us if we still wanted a computer lab or if we wanted anything, anything that we said we still wanted that computer lab because of the kinds of things we had the kids do...and instead we have five laptops per classroom which makes it different to do some of the things we were able to do in the past. Um, construction wise I'm not even thinking of some of the things that we said we wanted but didn't get (25:46)

R: and I think you know, coming from the design point of view I understand why they, they probably put forth these changes that were different than what you asked for because they assumed that it would be better with time and that you'd embrace the change but a big part of that happening is that the teachers being taught why they did it the way they did. And did they take that step? Did they tell you, "this is the school, this is the design, and we expect you to maybe alter your teaching style", anything like that?

T: not really although, I mean, we have the project area out here which, probably my favorite place because that really kind of goes with a lot of the things that I do when I'm teaching and so my kids are done there printing off and um, and it's big enough for my whole class to be there at this whole point. Your space that you use for instruction is very space. I mean, when (bell)...barely fitting and there were only twenty of us, or twenty two and usually my classes are like bigger than that and I was thinking oh wow, what are we gonna do if we get larger classes again? And then, some of, and then space on the other side of the meeting room, again if you could how many. It could maybe accommodate ?? Children, being open, it's not a great teaching space and I don't see it being used very often except by

T; yea, small group

T: yes, very small group or one-on-one teaching. So I see this space and it's almost like wasted space because my classroom is also small and from what I understand they consider the breakout room as part of my classroom for square footage but it's not.—

T: cause you can't use it!

T: Because I'm getting a new student on Monday and I'm thinking – where am I going to put another desk in this room? So the size, you know, I know that's one thing we said we'd like our classrooms to be bigger so that we can, you know, move around freely and uh, feel like we have plenty of space because [REDACTED] classrooms were rather small but this classroom's smaller than my classroom so that's, that's one thing. I'm not even sure if I went on a tangent maybe

R: it was a good tangent!

T: okay good.

R: yea cause those things, I can see them, this is all my assuming but I come from an architecture background so I know kind of how they think, so if we give them smaller classrooms they're more likely to use the project space and that type of thinking but they don't always think it through to like, what if, everyone cannot use it at once.

T: yea, you have to sign up and that kind of thing, which is fine, it's fine um,

R: so how did the transition work? And I'm sorry that these questions are kind of leading you on a little bit but so, I know this probably started a few years ago, the design and everything but once the design was built and you were moving, was there any sort of process or training or acclimation to the school or was it just, you're in this classroom and move all your stuff and be here to teach? Or were there actually like introductions to the building, I guess?

T: well we were able to go into the building before it was finished and stuff and they would show you, oh yea this is where to is going to be and....we had that type of stuff

R: did they explain that this area should be used for this and you might want to consider when making your lesson plans to have more group work and kind of use the space in the way intended

T: not really a training, I mean, I know, speaking to my principal and you know, she said this would be a great area for you when you do your projects, that kind of thing...but not, not as a training for the staff. And she mentioned to me that the amphitheater would pushing you, that I often would stay, and take my kids to the library in the past, the old [REDACTED] library and do my read aloud there and so she said, this will be great! You can come down to the amphitheater but it didn't, because it's louder it didn't work out. So I mean, she did kind of show me different places where she knew my teaching style and thought these will be good places for you to bring your kids um and maybe she did that with other teachers too but not as a whole group (30:10)

R: let's see, any other comments about the space and you know, your communication. I know it kinda seems like, not as good as it was before

T: It's a pretty building. You know, architecturally. I love that hall! You know, but I am sympathetic with the, because of the smallness of the rooms. I thought, you know, It's beautiful but, but how much learning goes on in that beautiful staircase? I mean, I see kids sitting in the bench you know, by the window there once in a while that, I think, if I had something like that as a kid, I would have relished

that. Oh course I would have wanted some pillows on there too, maybe a blanket (laughing) but um...I don't know. It's hard for me and you know the fact that, that space, that cafetorium space is so small!

T: right, the gym space, we had a space that accommodated bleachers so we could get in all the parents and all the children in the school for a performance and now people come in for a basketball game and have to stand on the sides. There's no place

R: so even the gym is too small

T: the gym is smaller, the cafeteria/auditorium is smaller, the library is smaller and I think when we've spoken among ourselves I think we felt like there's a lot of wasted space. That it could have been, like it's lovely to look down into the library but that could have been a learning space you know, because really other than pretty and the same thing over the amphitheater goes right up to the skylight, that could have been another learning space or another lab space to perhaps extend their classrooms in some way. Just so that's the kind of thing we're looking at. We're feeling like we're cramped again. We're feeling like we don't have storage

T; I don't have storage in my room. They got all my drums over at [REDACTED]

T; so our multiple copy library is way down by the gymnasium so if we have to go by it which we do have to go exchange our books it's kind of a hike down there but it's really the only place that was available to store multicopy library um so yea, there's the lack of storage is another, that's another on I know that we've said "please, give us all plenty of storage space" because we had so much that we need to accumulate and have to build these units and gather all these materials and so it's just once again not even space to put them all (33:08)

R: alright, those were kind of my main goals. I wanted to hear about how is it happening...because next week I'll send out a collaboration survey which is just a one time, it'll be the last time you hear from me kinda thing (laughing) that kind of puts all these things together in kind of a quantitative way but since you never know how many teachers respond so having these kinds of anecdotal things are kinda helpful especially in interpreting the final results. So I appreciate your time a lot. And take snacks with you! And look for that email next week and one more communication log tomorrow.

T: I was just thinking...a lot of times I don't think I am putting down my scheduled staff meetings because things like that because once the staff meetings are over, I just pack up and go but that's another thing is that there's really no place for the staff to all meet—

T; yea, no space – it's too small!

T: like everybody's picked their seat now so I just feel like I'm standing for the rest of the year, right?! You know what I mean, I feel like if I went to take a seat that somebody's already kind of claimed, and I'm fine with standing but the fact is...

T: you shouldn't have to

T: I couldn't sit if I wanted to because there aren't enough seats.

R: is this in the conference room?

T; we meet out in this project area and there aren't enough seats for the entire...there's no place in the building that the entire staff can congregate.

T: unless we go to the cafeteria and sit on those funny little oval tables and that's not...very good either, I don't think.

T; so it's that, it's just. I just wish everything was just a little bit bigger everywhere. Cafeteria, gymnasium, classrooms, project areas, just...

TL even the teacher's room downstairs . it's almost like a closet so people don't' really eat in there, they actually go to the project area. We call it the café and they'll eat in the project area by the first grade classrooms

T: yes, yes

R: yea I glanced in that room early and it looked really...

T: I was just thinking that our title 1 staff, there was no allotment made for where they were going to be.

R: did they, yea are those the ones that are hunkered down in the project areas?

T: yea, in the project areas and they took over another, in the breakout room, and they took over a project area, like the first day they were....and there are two desks out in the hallway down by the staircase for title 1 so there was no, even though they worked here last year and the year before and they knew they were coming back there was no allowance made for. And again, I think tis' like, "well our hope is that they will get into the classrooms and be working with the teachers and the children in the classrooms" which is great but they still need space

T: they need a home base

T: yea, they need a place to

T: so, you know, since one wasn't provided they took over that space, they took over a storage closet down there. I can't blame them, but it's like, yikes!

T: yea, it means, that, it's true that when you come up the main staircase and you see two teacher's desks out in the hallway fully set up so you know people are working. It doesn't look good, it doesn't speak well

T: it makes it look like we're already running out of space!

T: which we are

T: which we are

T; even those empty classrooms are now being used by High School students and the Pre K

T: and even up until, we just noticed yesterday, notice the pile is gone now – where you here when there were stacks of boxes both here and here. Because we were told last year that we'd be able to use

the HVAC room for storage and then the fire department came a couple months ago and said no no no no no storage so someone who was a fifth grade teacher last year and who is now a third grade teacher had taken all the fifth grade teacher boxes and put them in the HVAC room. The janitor came, had no place to put them, so he stacked them. They were all right here in our teachers rooms and somebody just yesterday said "where did the boxes go" so we don't know where they are. They're not here anymore. I haven't bothered to investigate where they've gone but at least they aren't here. So...

R: well hopefully with time...

T: well, yea, and it is, but,

T: but.

T: I just wish it were a little different

T: well it's frustrating when people have taken the time I think to express what they would think would make their classroom, their program, to make it work and then things don't get...those things are kinda left out and you're left with ...well, this isn't really working

T: right, I think if you just put a floor over the library we can just have a big storage (laughing)

T: yep, yep, and I was at a different school so I wasn't involved in any of the planning for this but I've heard you know, something as simple as having a sink in the library was something that was stressed and that never got put in.

T: right and there was a sink in the last one

T: right, right, and things that kind of made it work well for them in the past, some of those things just weren't incorporated into this plan

T: and even your storage, where? Do you have any storage?

T: well, one closet right next to the art room, we have stuff in there, yup., like the VCRs

T: I kept thinking, I wonder those area...(laughing)

Principal Interview, School A → B, Spring 2013

FR: this is where communication occurred out of people that completed the communication log. So a lot were in this hallway but I don't know if that was a factor of just those teachers

P: it could be, that's four and five

R: one of the responses I've gotten so far where just that the hallways allowed more visibility because you just see down further and here things are more sectioned off so it's harder to see where people are which I think people will get used to after time

P: I don't see it...this was like a highway. What when I move around the building, I can see down the hallway, I can see much more than I...because I see right through the library. I see right to the amphitheater. If I'm upstairs I can see all the way down to the glass wall above the amphitheater.

R: So here at [REDACTED] where did you feel that the most teachers talked? Like in the hallways where did most communication occur?

P: right here (points to map)

R: just because of the teachers' room being there?

P: yup, because there really wasn't any...the hallways were too narrow to have a conversation. Those little ears were always around. If not here, than maybe in some section of the library. It wasn't...the hallways weren't....and maybe the teachers will say different but as far as what I saw, the hallways weren't conducive because the hallways were too narrow and there were too many kids around. So you had to be mindful of any conversations that little ears would pick up. If the doorways, if the doors were open because they all opened out into the hallway, little ears could hear. With this case, because the doorways open to a little foyer that goes into the classroom, that little ears can't hear out there. So and when those doors close, whether it's in the breakout rooms or the classrooms, it's a very...it's shut, you really can't hear out in the hallway.

R: gotcha, that's great and uh, something that's interesting and they were talking about the interplay between the teacher's room and the breakroom that were attached. Did you notice, I guess more of an observer different types of communication interactions that would in one space versus the other

P: ummm no, but however, what I saw was that at lunch time we did close the door between the teacher's room and the teachers workroom and I think that the location of the teachers room and the workroom at [REDACTED] had parent volunteers who working in the teachers workroom here...made it tricky!

R: just because of what you couldn't talk about and things....

D (nods) and that's not the case here

R: oh do they have another room? I thought...

P: they have upstairs, they have there, but they have got a copier out there...(interruption from teachers)...with the copier here, and the location of the copiers what I have now is there's more here which I love having the conversations here (in admin) this is a safe area, parents don't come back here. they can come in here if they wish, meaning with teachers, the nurses' room, it just, it pulls conversations that would be out there in neverneverland, here and we can have some pretty confidential conversations right here and I like that...they also have confidential conversations up in the teachers' room where the copier is and our parent volunteers, though they're slim at this point but we have some, um that we have copier in the downstairs teachers room which is more of a workroom. There's a laminator in there and so those people are focused there. The teachers have really cornered off the upstairs teachers' room.

R: was that intended for the upstairs one to be used by them?

P: no, nope

R: so they were supposed to be equal spaces...you can choose

P: yes, and what we found out was, they weren't equal spaces. So we took the upstairs teachers room and the furniture people were....I won't put that on tape....they put the tables together (closes the door b/c of screaming, makes point of how it's so quiet now) they have just said that upstairs is for them at lunchtime. it's worked out well that because it's in the center of the building and what I find for the teachers room is that first grade I guess goes up, you'll find out, sometimes they do, sometimes they don't but the rest of the staff all go up to that...because it's a perfect, right by the staircase, and the location of the teachers' room upstairs looks out at the playground and was like...we didn't think of that! So the teachers can see when their kids are ready to come in and they can right down the stairs and that...just that kind of incidental things that we didn't plan has worked out just super because you can stand in the window up there which looks past the art room right out to the playground.

R: that's awesome

P: there's also upstairs the location of the reading specialist, the speech therapist, sped, are all bang bang bang right beside each other. You got the teachers room up there so that area...and that didn't happen in the other building. In the other building you had sped out here, you had speech therapist here, you had the reading specialist office out in the [REDACTED] unless she was in this room that and then the title one folks were either in this room and then going around to classes that now with our location, everything's consolidated and it just....I mean I can go and the teachers can go from our reading specialist to speech therapist to sped all within 20 feet

R: now, do you think it was, do you think that there was more spontaneous interaction with them when they were scattered around the school because they'd see them right outside their door or is it better to have th...

P: it's better, I...because you had the hallways and you had kids walking through the hallways that I, I just, what I gather, what I find I have more spontaneous conversations because people can't hear us. I can, we can close the door, the doors don't open into the corridor, it really has worked much...well and um, the hallways I love to tell this story and I told it to [REDACTED] that during the [REDACTED] our statewide tests back in October, [REDACTED] has a kiddo that was really stressed out taking the test and can easily beat himself up so we said to the kid, take a walk, work it out. And this is upstairs so the kid walks down the hallway and was probably gone, I don't know, probably 4/5 minutes at the most and there's so much to look at, up over, they can see down, they can see in classrooms, so it's not this tunnel mentality. It was nothing pretty at [REDACTED] to look at, absolutely nothing and so you've got all of these colors that are in front of you and it would just bring the kids right down. Um...I see teachers bopping in to other places upstairs and having quick conversations. Again, if they want to go speak, talk to [REDACTED] or SPED or...they're out of the hallway, they're out of little kids and that was not the case here

R: Now, is there anything you miss from [REDACTED]

P: nothing, absolutely nothing...it was not, it was, it was too long, the people out here had no idea what was happening here. It was a building that I worked in for four years, that's it. [REDACTED] on the other hand was a swell building, the old building that I was principal of, the [REDACTED] part of [REDACTED] and that was pretty. It had color and we put the color in it. The rooms were big, there was good air, but this building and over there there were places where you could have conversations with people and kids wouldn't hear, not great but at least a little bit but in that building uh uh. I didn't mourn that one at all. It just...it had used its usefulness. Then you had this funky thing out here....

R: yea, I didn't get to visit the gym.

P: Oh it's just...it was a gym made by adults for adults and children used it. It was done in the late 80s or mid-80s. It was done very quickly with cinderblocks. The acoustics were awful, the lighting was awful um...the bleachers that were in there could hold probably 400 and but with classes for phys ed it was too overwhelming. It was also, the kids had to run between this area so when they did, when they made the library back in the mid-90s. I dunno, it was some strange reason why they didn't enclose this. It was crazy thing about snow plowing that someone; the principal should have said forget it. Forget it; you can go around the building. So now the gym is a part of our building. In inclement weather we use the gym for inside recess for the 1st and 2nd graders. It's not used. so rather than the little kids going back to their classroom and doing quiet play they go in there and raise holy Ned. Again, it's all so close that you don't not think about it. We use the gym after school for lining up for the kids that are going to the busses, that kind of stuff. So it's just been, you know, I...I think that people, the staff that would say that they miss [REDACTED] only because that's where their lives were for a long time. My music teacher had this horrible little space and she's got a beautiful space now, absolutely gorgeous. The same with the art room which was kind of stuck here, where was it? It was stuck right in here somewhere and uh, hotter than Ned or freezing. Again, a room that wasn't made well and it's probably a third the size that he's got. Now, no I don't miss it at all. And the library, because this was an open passageway down to the cafeteria, that this was always disturbing them, all that kind of stuff.

R: right. and did you see it happened where teachers would use the library during classroom...I just notice that sometimes they would talk about communication occurring when they had students in the library and someone would walk by so for the teachers it was helpful cause they would see

P: they would see people but again, you couldn't have conversations because there was always kids underfoot there. It wasn't, it was set up, well, the old fashioned way. There was....a communication sometimes can sometimes be walking down the hallway and looking in and catching a teacher's eye now.

R: which is great!

P: the little kids with the doors, now this doesn't have it on our door but the doors that are into the classrooms as far and as far ...the breakout rooms have got the lower porthole and my little kids do use it. They do, they look out from, especially kindergarten, they'll look out through that. They can see if they're walking, otherwise their eyes would be right about where the doorknob is and they will look down there.

R: that's awesome, that's great. So yea...that's helpful I'm excited...it's cool.

P: yea, really, It's, the other great thing is that, we can, [REDACTED] room, she's got all her geraniums in her room. [REDACTED] has got all her geraniums; I've got to bring mine in after Christmas. We could never do this in the old building because they'd cook. Second graders do plant poinsettias in late September and watch them grow and then the leaves turn red. Invariably we'd lose a dozen because the heat'd go nuts one night and we'd cook them all

R: it's amazing what an upgraded building will do.

P: the light is good um...they have a variety of lighting in the classroom. Some keep it off, some do parts of it

R: yea, I didn't, I didn't look at it. Is it able to where you can turn on half the lights in the classroom?

P: yea they've got, where I've got just an on and off switch for this, they' have kind of a multi-switch

R: it's one of those; I wish I could study every aspect. Our department, we have groups that just look at those things (chit chat for a bit)

P: there was not concern by the staff, by the faculty, but I think others, someone, other people were concerned about the colors, that the colors would excite the kids. and when I said this to [REDACTED] she did what I'm doing and twinkled and said because they don't use one color that even in this room, well we only have three, that some of the rooms have four, five, six colors that it doesn't you know, the um mauvey color with the coral bells with whatever that yellow is this one, that yellow and then mine's the only one that has the single color with the cobalt, that it doesn't...it just makes it feel calm. I I, I know my staff is good but I'm wondering if we we're having a low incident of upset kids. I, I I don't know Raech, I don't know whether that has an effect. The rooms are comfortable. They're running, oh...this is 73...between 69 and 73 as opposed to too hot, too stuffy, too cold, all that environmental stuff

R: makes such a difference, yup

P: they have room in their classrooms so they're not sitting on top of each other the way they were in the other building. That was not the case in [REDACTED]. At [REDACTED] we were running classrooms about 950 SF so we had room um we don't know if the desks that we us in grades 2,3,4,5 make a difference, I don't know.

R; can't study everything

P: that's right! But to get back to it, lots more conversation right here, lots of conversation in the morning when people are coming in. I like how, I've seen the other buildings for their offices, [REDACTED] as well as [REDACTED] I like mine the best because it's not hard to get to. [REDACTED]...uh what was it where was I? [REDACTED] just seems hard to get to and it's too close. where...and then the teachers rooms right there, I, I'm not impressed with the room, I'm not impressed with the layout. I dunno, I just don't care for it. Where this one you can go out the back exit, by the nurses' room or the office, it...the flow is nice.

R: do you ever notice teachers during their planning period instead of staying in their classroom; do they go anywhere else to do their work?

P: they will go to their neighbors' I see that happening more and more. Uhh I'll see them like 3 of the fourth grade team wandering around the building, looking. They will sometimes go to the teachers' room. They're not a...this staff and the [REDACTED] staff are not people to hang in teachers room. They're just not. They go there for lunch; they go there for the socialization at lunch time. If you go to the teachers' room otherwise you're going there either to use the laminator or the copy machine or some supply that's in there. They're, they're not a wasteful, waste time group. They do what they need to do. They all have laptops so they can walk around when we've had staff meeting I've asked them to bring the laptops for different activities we're doing, mostly for data collecting. And they're very comfortable they just all walk around with it I see the sharing there at staff meetings; someone may know how to get on...whatever we were doing, performance plus, each one works with the other one. There are, there are friendships here that extend after school and yes there are workplace friendships and I think for the most part it's a real healthy workplace friendship. Yea, some people may annoy us sometimes...that's always the case. You can go back to your room and close the door, respectful of each other, um....no uh, no underlying...there had been.

R: so that's changed since...?

P: yea, the former principal really promoted undercurrent. She, her communication skills were not great and so she promoted without even realizing it, uh a lot of negativity in the building and uh

R: and have you seen any of those relationships change due to the space from [REDACTED] to here or are all the friendships, the relationships still the same

P: the friendships and the relationships have stayed the same and what I'm seeing is that if you were way down here, you never saw the people here. Now, because we're stacked this way, I'm seeing more.

R: yea, that'll be interesting to see if on the communication log people are talking to different people because it was definitely a trend that you talked to people that were around. So that'd be cool to see if maybe they talk to people under them or in a different part of the school

P: they may not recognize it for a while but that's what I see. Um...they do have their, several of the classes have buddy classes for buddy reading and it's upstairs downstairs and because upstairs, it's more upstairs coming down than down going up but up is down in the library or wherever, or walking, and sometimes they'll take different routes to get places because they're tired of going the same route, is that they're, I really think they are more cognizant without knowing it, they're not cognizant that they're seeing all this. They would not see upstairs and maybe second grade too would not see some of our autistic kids because they were way down here so now they see or hear [REDACTED] or [REDACTED] or [REDACTED], now they see them in action.

R: so are they mainstreamed here?

P: mmhmm

R: so they're in classrooms

P: they're in classrooms as much as they can be and we really do push it and yet they also receive discrete trial work in a particular classroom. However, what we did do, very purposely, is that right here was, right here was our student support room, right here, I guess right here(points) and uh it was right out in the open, that staff members could, and they did, they made value judgments on what was happening. That the kids how were in here, even if we didn't want them to have an audience, they often did because we'd have to block this hallway if someone was throwing a hissy fit. The building wasn't sound proof so if a child was having an out of body experience, this whole area heard it. um...where we put the student support room yea, it's a pain in the neck to take the kid a half a mile away but no one sees it but my guidance counselor, myself, the art teacher who's always helpful and the student support teacher.

R: so where is that in this building?

P: it's down by the hallway, the middle hallway

R: yea, that's right, I remember vaguely there's that kind of hallway between spaces that's kind of in the middle of the school almost but it's like very cut off

P: yup, and it's pretty well sound proof, they put some stuff in, the put...I wish I had known that they were going to put some things in there. Maybe, maybe somewhere down the pike in another life, they will use the internet connections and all of that and there is a padded area. It's open but the padded area and there are beanbags in there and that's it. So it's a spot for kids to recover and no one is in their face. Teaching assistants or other people or parents or anybody walking through the building...it's remote so they have that privacy and we have the privacy with them. Disciplining or working through a kid that's had a real meltdown, it's kind of hard -- I have no problem doing it in front of teachers but some parents don't get it

R: right, they think something's bad or going wrong

P: in fact, I was giving a parents a tour the other day and one of the autistic kids was frustrated so he screams and I said that's an okay scream, I know it tears your heart out but it's an okay scream and he's frustrated and that's how we've kind of dealt with it. I could see the moth ergo "phew" alright, it's not that was naughty...nope not naughty, we don't use the word so...

R: gotcha, that's so good, so glad that it's all so nice! So any other, I guess, big differences between the two or....benefits because I'll doing all of this again in spring when it's all settled again so what was different from [REDACTED] specifically in regards to...

P: before the building started, the drop off and pick up at [REDACTED] was awful because we had, where we're sitting was a front parking lot and the school was back there, way back there and so you were always having parents that were pulling in here, parking, pulling, going out in traffic, oh it was just, it was a nightmare and the former principal had tried to do some things and having teachers park down there to dissuade parents from parking....well that now all works. and then...it was an accident waiting to happen, thank goodness it never did Buses would pull in down here, kids were way the heck back there so you had to march them from the building across [REDACTED] to the buses...snow, sleet, rain, it was, it was just, it wasn't, it wasn't good. Parking behind the building was tricky because there wasn't enough parking places. Then, when they put in, when we started doing the work that we, we changed, altered the whole traffic pattern and it still, I think our traffic pattern now with the parents some park over here, there, outback, and the parking area....it, as long as the parents are courteous to each other and pretend that they're in [REDACTED] airport or [REDACTED] airport and just give other parents the grace of time. When I'm out, when I'm out there they also know who I am but they're courteous. I know that some of them have flipped each other off because they want to get out of their quickly well, it's not gonna work anymore than it does at the airport. It's safer, the teachers all walk the kids down, the bus kids go down to the, down by the gym and get in lines and then my specialist take them out and then the classroom teachers walk down and the walkers and the kids that are being picked up out to the plaza

there. The teachers all are making connections with parents and they love it. The parents love it. The teachers also make sure that... I mean, the teacher also make sure that the child's going home with the right one. We had a parent, a babysitter back, day one or day two, her children went to [REDACTED] but it was in the old days when kids went out the front door and down the lawn. So to this parent, to this babysitter that can be nervous and jerky and in fact, my fifth grade teachers know who exactly "oh! You're talking about so and so" yuppp that she saw it as organized chaos and that people could steal children. Not really because there's 25 adults out there and they're pretty...they may look like they're not watching but they're all watching and at that, at the beginning of the school year I had a rank of classroom teachers plus a lot of my specialists, my sped and reading people out there to also help monitor the traffic flow and everybody's very cognizant of it. So that works well after school and within 8 minutes, it's all gone.

R: wow, that's great

P: yea, so it's flowed easier for the buses, pickup of my bus kids, slam, bam out!

R: awesome, yea, cool

P: yea, I really don't have, I don't really have many, I don't have any nasty things about the building at all

R: that's wonderful. I bet the architects are relieved - do they still come and visit?

P: yup, Laura was up last week. She was doing some filming because they have a show at...someplace in [REDACTED] next week and as the new changes in elementary schools so they were interviewing, they were taking pictures, we were staging some things. [REDACTED] and the camera guys had been here once before and I just said, go for it! And then they came back because they needed some more filming so they came and spent a day, interviewed different kids and what did the kids? [REDACTED] was having a good morning so I chose him and a couple other kids and what did they like best about the building? The colors. That flows right to the top in fact, there was a parent here last night, I was on the top of the staircase and a parent was coming in for a parent conference and he said, he was talking to his wife and he said, this staircase reminds me of a courthouse! And I said, that's right! It does and there will be kids up in that seating that's up over here

R: I was going to ask - does it get used much that little window seat?

P: yup, yup....we'll find them all over the place and what I've told the teachers is let them go anywhere because there's plenty of adults that are walking around so there's never a point where the kids are going to be able...the only place they really cause any mischief around here is in the bathrooms so we've got the doors all propped open and then, the little first grade boys didn't like the johns because they did the automatic flush and then the lights wouldn't come on fast enough so the kids would have a problem when they'd go into the bathroom. That's another reason why the doors are propped open. So now they're flashing....so you're welcome to just wander!!

R: yea, I have another 20 minutes before I talk to [REDACTED]

P: oh she's great. She's got a nice location. I'd be interested to see what she says because she was way down here

R: yea, so that'll be good. It'll be good to get very different perspectives

P: and they're friends. They're workplace friends

R: and were they friends here too when they were on different sides?

P: yea but they didn't see each other! So now, kindergarten sees what's happening in the building where

they really didn't see it an awful...because they have a different schedule

R: so it might be that we even see different communication impacts depending on where you moved from because there's some people that maybe "well, I was fine because I was in a good location before" but other people weren't so that'llcause I think personally, I think [REDACTED] was in quite a good location because she was so close to the cafeteria and everything so like, for her, it was very different but I guess if you were here

P: they have no idea, the same with the first grade that was here, there's still a group right inside the door there but they see all the comings and goings where they didn't see the comings and goings there. It's a healthy place, mentally as well as physically. I haven't had many staff, we never were building even though this was an unhealthy building with the mold and other things so my teachers who I was concerned about by the time we finally left, [REDACTED] hasn't had a problem. And I know there's some others that haven't had issues either. They're just not; they're not as... [REDACTED] gets sick because he works with kids with snoogies so my teaching assistants are apt to be...but the regular staff, nu uh.

Teacher Interview, School C→D, Spring 2012

R: were you at the old school last year or is this your first year?

T: first year

R: So here I guess...generally the topic of this conversation will be where did communication occur the most and what you miss about the school or what you are glad is gone in terms of the space. So generally though, where do you think most communication occurred in the old school?

T: Um the office....let's see...the office and the teacher's room I guess

R: which is here, yes? Right next to the auditorium

T: yes that would be, the biggest place. If we had meetings in the library sometimes so that would be another place

R: and where was your classroom?

D; my classroom was on the second floor, yup, up here. It was...I think...gosh I'm turned around here (loud noise turning around map) yes...the stairs are here and I was...no, wrong side of the building...

R: I know it's hard to read...

T: Oh it's right here!

R: I'll put a start there just for reference. Cause we will both talk about your communication and also generally what you noticed. So what was the communication like at this school?

T: well the communication at the school was really good because we were encouraged to have communications. So we have a collaborative session set up where we talk about kids, where we talk about...those were set up for us

R: how often were those?

T: those are...and we still have them at this school, once a month. And then we have...so we have collaboratives where we talk about kids, mostly around literacy. Then we have project C times where we have science people come in here and do lessons with the kids and that's once a month also and then we meet to talk about other types of things that are going on grade-level wise because those are grade-level communications. Both of those are grade level, they're not whole school so those are both grade-level. And that's where most of our communication happened was at the grade-level...we also had something called TLC's which were Teacher Learning Collaboratives where the grade level would plan a lesson around a need that we saw through data and so we would plan a lesson with a facilitator and then we'd go in mass to a classroom, all four of us we'd go and we'd teach that lesson to a class. What would happen would be one teacher would take a part of the lesson and the next teacher would come in and take the next part and the third and fourth so we could first of all view each other teaching because teaching is such an isolated field. We stay in our little rooms. So this way we got to see each other teach. So we'd teach the lesson, we'd go back and we'd say what went well, what went wrong, we'd revamp the lesson and we'd do new parts and we'd go to another classroom and we'd do it. So then the other two classes that didn't get the lesson, those teachers would teach the lesson. So that was a real collaborative communicating type of thing that was very valuable and that's happens...that happened there but the principal of our school, Mrs. [REDACTED] at that time, [REDACTED], her daughter was the facilitator and so it happened more often than, although her daughter wouldn't have been available this year anyway even if she had stayed as principal because her daughter's job has increased. So we are going to have her a couple of times. We've talked about doing those collaboratives again but they

haven't happened yet but it's still early. So we're hoping that we'll be able to do them on our own. We're hoping that we had some good teaching and we'll be able to do them on our own.

R: So a lot of the formal collaboration was set-up regardless of the space. So it was just completely organizational which is something I'm looking into too - which is more important? So in regards to just spontaneously seeing teachers, where would that occur?

T: probably in teacher's rooms. You know, know we'd...you'd have set up schedules so that schedules allow for that. So all of our specials are at the same time. So for example right now all of the second grade teachers have all our classes in the special so if we need to talk, we come together and talk. We also certainly communicate through email. We also....we might meet in each other's rooms. I don't think we ever really got together in another space because there really wasn't any space. There really wasn't

R: What happened in the teacher's rooms? What sorts of activities?

T: lunch

R: just lunch?

T: yeah just lunch.

R: where was your copy machine?

T: well the copy machine was in the office and that's why a lot of stuff was in the office um....there was another copy machine up in the auditorium but usually there was a class going on here so we would not be able to really communicate there but around the copy machine in the office there was also, there was a lot of collaboration but other than that there was no space. So teacher's room was lunch and sometimes it was formally set up for special ed meetings but mostly lunch and that's a lot of talking goes on at that time. for many reasons, for many things...just fun talking.

R: right you need that as well

T: exactly! But...you know, sometimes complaining sometimes.

R: so would the office kind of act as the "Gather around the water cooler thing" while you're in the office making copies?

T: yup, exactly, yea if you happened to be there and you saw something that a first grade...and of course, walker was only K, 1, 2 so if you saw a first grade teacher doing something and you looked and "that's pretty interesting, I wonder how I..." and we'd talk about something that they're copying or we might talk about just kids in general. Kids that I have now that they had then you know, that kind of thing so that would happen. But you know...it didn't happen, I mean...that would probably be the place where most of the small communication would go is the office area

R: now how often did you personally experience that? Was it every day? A couple times a week?

T: well we certainly are in the office every day and would have some type of communication there every day but mostly any type of serious communication might be three times a week, maybe two or three times a week

R: and do you think you saw all of the other teachers in your school every day? Did you pass by them and know who was there and what people were up to?

T: No...When I was on the first floor, because for two years before that I was on the first floor, I always knew who was on the first floor and never really saw who was on the second. When I was on the second floor, there's this smaller group of us up there but there would be times when I would never see

the first grade teachers without going to them and that's the same here actually.

R: Is it mainly the floor separation that is the biggest contributor?

T: It is the floor separation as the biggest contributor.

R: yes, that's an interesting thing I've discovered today.

T: the floor separation is huge here...you might as well be in two schools because I rarely see the teachers upstairs. I wouldn't even know...I wouldn't know if they were absent, I wouldn't know anything here.

R: and that was the exact same case at the old schools as well?

T: similar not as much. I mean it was a smaller school and I certainly never knew anybody at [REDACTED] but see that's it, it was like two schools so not as much. I mean, I wouldn't know if people were there or not

R: yea it's amazing what difference size will have, what kind of impact. So what do you think, was there anything that worked really well at the old school in regards to helping communicate?

T: I think just the atmosphere that was developed was a collaborative atmosphere. So it always seemed to work well. I don't think there was any; I don't think it had anything to do with the space really. I think it had more to do with the people who were in the administrative positions and bringing it...

R: yea, it's hard to tell hear what makes...is it different this year? Is that environment still there?

T: I think that environment is still there. I think that we all have a really good respect for each other's teaching and work. I feel strongly that we have an exceptional staff of people in our building.

R: great!

T: of course, we see them more now because whenever we have a faculty meeting they'll all here and yes, we occasionally see them in the hall and we occasionally see them in the hall and say hey how ya doing?! But collaboration wise...I dunno. I see them once in a while. There are some teachers I don't know that I...I saw [REDACTED] the other day and went "oh my gosh, I totally forgot that Rachel was here!"

R: and is that just because the situation having the two schools coming into one, you already just don't know half of them

T: no, no I know all of the teachers...it's just a matter of the floor, the floor separation. I think it's huge. It's really you know...we do see each other, we have times after school we're doing, because of the new technology where we can come together and learn of the new technology and if someone wants to learn about that, we'll be there and we'll see people weekly in that way but other than that, I really, you know, they all have, they have a teacher's room upstairs. There's a teacher's room downstairs. Now I think that's only fair but....and I don't know that we would see them if we were in the teacher's room here because the time that we go to the teacher's room is lunch and the lunches are different. So you know, that would be. So they have copy machines upstairs we have copy machines downstairs. So...I think we, we can kind of live in our own places.

R: so there's really no reason to go to the other floor that you don't work on?

T: nope

R: But here ([REDACTED]) there was more incentive correct? Because there was a copy machine here but you

were drawn to the office and that's not the case here

T: more to the office yes, especially when the upstairs one was broken

R: (laughing) yea...that'll do it

T: and that happened more often than not. Or the downstairs one was broken we'd all meet upstairs

R: so wherever the copy machine was, you'd go

T: the interesting thing is that here, I don't see people at the copy machine very much which is interesting. We have more copy machines here so that means there's more availability um...I rarely am in a line for the copy machine. It's wonderful right now because we have a copy machine right in this hallway and so when I come in in the morning I go do my copying, I come here. nobody is in line there because I'm an early person so I come in and do my copying and I'm done and so, I don't...there's never...I never see a backup of copying. So we don't meet around the copy machine very much here.

R: so where do you meet? Is there a place for that?

T: well there are several places. Kind of formally we have the conference room. Um...where we meet not just collaboratively but where we also meet with parents and other things. Um...I do have to say that having our rooms for the first and second grade, having our rooms close together like this is nice because we can kind of you know quickly catch somebody. Um...I guess the way it's set up we always, we kind of walk by each other quite a bit. Whether we stop and do a lot of talking....we still have the same schedule and the schedule is what really helped the communication in the other building and also does the same here um...at least for first and second grade. Um we still have collaboratives, we still have all those formal things and we go into each other's rooms to do that so really these wonderful areas out here are great for bringing in kids together but rarely would you see adults meeting together out here together

R: do you think having those out there thought forces you to see other teacher's more often just on...

T: yea, oh yea, definitely. I definitely see our staff, the staff that's on the first floor; I see them more often than I ever did when I was on the second floor at the other building.

R: so overall, do you think communication is better, worse, the same here?

T: I don't think it's different.

R: you think it's the same? The amount you see people is the same to generally?

T: yea, generally. I mean, maybe a little more here I guess because we're all...for the people that are on the first floor but I certainly don't see the upstairs people anymore and it seems like we should because you know, we're like a town away from each other

R: so is it divided by grade level, the floors?

T: well it's interesting....down here is first grade, down at that end second grade, down at this end...and because of the number of rooms there is one fifth grade in the back here. She might be one to talk to because she might not see her colleagues.

R: what's the name?

T: [REDACTED] She's been out here all day working with title one kids. You know, she's the one lone fifth grade down here. upstairs it's third grade on that end, fourth grade kind of in the middle and fifth grade we have two at the end and then one downstairs and I think the plan if we were to have four

fifth grades was to have two and two.

R: okay so at least someone has a buddy. So is there an extra room by [REDACTED]?

T: yes, there's an extra room by carol and there's also an extra room because we only have three second grades so there's an extra room by [REDACTED] down at the end...and I think that you might get a different...I think when you're at the ends of the building now that end because it's near the parking lot and our wonderful custodian opens the door in the morning for us so that we can come in that way nearer to our classrooms when we're carrying our heavy bags. He, so we go by everybody's room but the person down at that end, you know, goes by everybody but then is there and probably doesn't see anybody so you might get a different....[REDACTED] has actually said "I feel all alone down here at the end"

R: so she's at the opposite side of the entrance so she'll walk past everybody but then just stay there all day? Is that correct?

T: she walks past everybody. she doesn't stay there all day but most of the day she's teaching and then...you know she certainly goes to the teachers' room and those kinds of things but you know it's just like, there's no traffic by here. You know, me I've got the book collection room across the way so there's traffic by me all the time. I'm always seeing somebody going by. Classrooms, kids or something. It's not distracting at all but it's you know, it feels alive but down at that end there's not too many going by so...

R: where their pockets like that here as well where there was may be more activity than other places?

T: sure, oh yeah...my room upstairs was up here and it was at the back of the school and you came in and you came in and it doesn't show it there, I that's what threw me off, there was a little like empty room before you went in to my room so it was this little room and then you went in to my room and I never heard anybody, you know, people wouldn't even basically come in to my room because they would, you know...

R: and that, did you like that privacy or would your rather be able to see all the activity?

T: um I guess, I guess...I mean, it was okay but I did feel set apart from the rest.

R: and then where would you? Where would it be the opposite case where you'd have a lot of activity around?

T: well then, when I was down at the first floor when I was at [REDACTED] and when I was there, I was right here (points to map)...when I was there, there were people up and down the stairs, there were people over here, people going to the library so this was a very active spot and I'm looking at this now and I think I picked out the wrong room. So there's my room, there's the little empty room here.

R: yea, it's confusing, not the best map I could get...

T: yea, there's the little empty room type of thing and then there was me here (unintelligible)...what's interesting, it's really interesting...not about collaboration but somebody said at one point "you're right on the street, you're going to see these people going by and it's gonna distract the kids" but most of the time the kids are sitting low in this area and they don't see anything but I'll be sitting in the chair and I'll see the neighborhood people who, parents of kids I've had before, and I'll go "hey!!" So I get distracted! haha but I really feel, and in this school I was in the back parking lot area and I never...first of all I was on the second floor so already you're just looking at the sky...so it's very interesting because I can easily get distracted which I could...

R: and do you think it's beneficial thought to have those positive distractions?

T: absolutely!! It makes me feel like I'm part of the community. I wouldn't stand there waving at them but it's just funny because it doesn't distract the kids. Oh! There's someone running! Cool!

R: that is really interesting and something that I think is real beneficial actually. Is that something you get throughout the school or is it only if you're kind of positioned in the right way

T: I think it's if you are positioned in the right place. I think if it's anyone along here and if they've set up their room the right way. I know I might change the setup of my room for after Christmas because the light coming in here, the sun coming in here, I have to pull my shades every...which I don't want to do...I'd rather have the bright sunlight coming in but the kids can't see. We may change things but I'm not sure yet but we may change things. [REDACTED] and I may have a moving party

R: and the space here, it's interesting because the teachers at [REDACTED] wanted to kinda of, they started talking about the new space a little bit more so now I'm just curious about how it is here because they are very different. It's the same kind of concept but do you think it's successful. Are the spaces all used the way they're intended?

T: I think it will get more used more and more. Now, for the first time today I took my kids down to there's this little amphitheater area down here, down at the end of the hall and we took all of our second grades are going to be singing for a [REDACTED] celebration on Tuesday at the cemetery. They lay a wreath and the national guard invites us to go...so anyway we're doing that so wanted to practice the national anthem so we went into this...first of all I've, we've never had kids down there before so they were, they all stood around, it's kind of a riser type thing and when you sing in that area;...and I'm a former singer and I also taught music, I would have loved that area as my music room because the music - it just reverberates, it's got great acoustics for singing. The kids sounded beautiful and I was like - oh! I'd rather sing in this place! It's really a cool area. Now, since we've done that now, I'll use it more often. I'll probably take the kids down there and read a story to them or something. It might be a nice thing. Upstairs there's this wonderful little story room...

R: yes, I've seen it...

T: which I really love. We've used it for stories but we have a storyteller who comes to second grade and we've kind of dubbed that our storyteller room, you know, and she kind of sits in...And it's just, we just love it and she feels cozy in it and we feel cozy in it. The woman is like 92 years old and she's wonderful. And then so, we've got that and then we um this area down here I tried to use for an iPad presentation thing and we were having problems with the iPads, not with the iPads but with the technology just school-wide and so, I couldn't get it to work but I do see where that can be advantageous to showing a film for more than one class where you don't have to disrupt your classroom and then this area over here, we used a couple of times and the time that we used it for all three classes to be out there (phone rings....) um...and so, we used it for what was it? Some kind of little project that we did...can't remember what the project was...oh yea! We made those trees that you see out there! We had those trees, we were talking about deciduous and coniferous trees and the kids made... (disruption by student teacher)....so what was I saying? so we used it out there and that was really fun because we mixed, the classes mixed up, we didn't have...I wasn't dealing with all my kids, [REDACTED] was dealing with other kids and Liz was dealing with other kids so it was kinda nice and we were working together and it was really a nice collaborative thing. We plan on doing it more for science. We have some activity things, it keeps the room relatively clean and we have stuff out there where we can clean up real quickly. So it's just, I think it's really wonderful space. I love the space. It is used every day for after school programs. After school program uses it to do what they call "mind-time" when they have kids doing their homework and so there're all sitting out there it gives them a place where they can do things, they're looking around and they see everybody. So it works for after school program all the time and I think it's....I love the space and would use it more often and I actually, my student teacher takes in the morning when we're doing more quiet time activities like literacy and math activities, she takes a literacy group out there and it's just, it's a lot quiet and she's able to go in one area and that's nice too, and the white boards...so it's equipped beautifully and I really like it. And we didn't have those spaces before. You know, if we could find a space, we would use the auditorium sometimes. I remember telling my kids....computer areas over here, we had these dividers across here and there was the stage right here. So we would be doing force in motion and we were doing these helicopter things and they

needed to drop them from a high place. I couldn't have them standing on desks so we went to the stage and when we had them dropping them from the stage, well, had to tell them, "now, there's a computer class going on so we have to be quiet while we're doing this and we can do this kind of clapping" ehhe but they couldn't be as excited. So in this space, no, we didn't have that kind of thing but we do in here and it's great. I think that it will be used more and people discover it more. It takes a while to do that. It takes a while to change your teaching style to do that. The...over here is used every morning by one of the classrooms because she feels like it's a great meeting space, you know, so she uses it every day.

R: that's great...and is it ever distracting out there?

T: I've never found it distracting

R: that's great!

T: good!

R: is it nearing you next time?

T: yea, I have to get them

Teacher Interview, School A→B, Spring 2012

R: Is it just because being in kindergarten or...

T: yes, yes there was another kindergarten teacher this year she's morning and afternoon but most years it's just been another morning session so um....I was flying solo so there's not a lot of collaboration when it comes to that.

R: so that wasn't necessarily a byproduct of the space, it was a byproduct of the scheduling. So, I guess maybe you could just speak about what you generally observed at the school. Things that worked, things that didn't. Do you have a general idea from this of what my study is about?

T: Yes, I did. I read it and thought that that was great that you had put that in there.

R: Yeah, hopefully that helps to kind of let you know what I'm doing and I'm not just this person that's making you talk to me. So I guess generally what do you feel worked at [REDACTED] in regards to teachers being able to communicate.

T: Is this the old?

R: yea, this is [REDACTED]. This is [REDACTED]'s floor plan. So here's the cafeteria...

T: in the olden days right?

R: no, this is most recent.

T: okay, yes, this is [REDACTED] yes, okay I'm sorry. This is where my room was, right here, and this was a... not kindergarten, it was a special ed room. So if you can see where I was right here and then the other class. It was kind of a long hallway...I definitely was isolated from the rest of the world, fifth grade being over here and fourth here. Everybody did go to the lunch room here all the time and it was just one-size fits all so that was....and it was right next to where the copy room is. So when I was either checking my mailbox or cutting up materials, it was the teachers' workspace. That's where I would often see people during my planning period when I had library. That is no longer the case because we don't have prep time during those hours.

R: so they don't have planning period at all or is it just not...

T: we don't have prep time as library because I have to be there with the kids, yes, so that's changed so that's taken away so this would be this time when nobody else has a break except for the other nice kindergarten teacher

R: so it was actually better for you at [REDACTED]? (interruption from other teacher)

T: I'm close to the cafeteria so we're able to do cooking stuff. I've always had my own cooking stuff but they didn't replace it.

R: Oh! So you work with the kids and teach them about cooking?

T: I cook every fun Friday!

R: that's so cool

T: It's fun Friday! So the, I was saying that yea, the schedule is a little bit different now but the teachers work room was right there so I could see everybody then, mostly when my kids were at library. I believe it was the same for the other kindergarten teacher

R: did you notice any interplay between...because I know the workroom was separate from the teachers' rooms so was there different things that would happen in each?

T: well there was a door that was open that...I would sort of keep open or talk to people or go through on my way and maybe cut out stuff and talk. I don't know that we were collaborating about lessons but what's usually going on in the building, that kind of thing. Which I would have no idea what's going on in the other grades

R: yea that makes complete sense

T: and nor do they know what's going on in kindergarten. It's very different schedules.

R: and do you think it's helpful to know? Is it something you feel a benefit knowing now that you're here? Or do you even know more now that you're here?

T: um...depending on the topic you know

R: because there's a big different between your grades and fifth grades

T: it is, it is

R: and I noticed that kind of a general sentiment that's been brought up they enjoyed the fact that the hallways were longer so they could see people and know....and I guess it's especially here because you see people going to the library and cafeteria all the time. And did you notice any of that? Being able to see teachers just were you were in your classroom even because you were so secluded?

T: Yea and I had my own entrance and exit. So what this was great for was being on the steps during dismissal time which is perfect for parents. Always accessible to parents

R: especially since you had a different schedule...

T: yea and parents really, they were saying that they miss that because we would just sort of hang out on the steps so anybody that was a little late, the kids, the parents were late picking them up knew to always to hang out on [REDACTED] kindergarten steps so it was a safe place to be.

R: gotcha, and how is it being so close to the gym and everything here? Is that nice or is it distracting at all?

T: um, yes, the noise level is up but I don't find it very distracting. Um, I'm thrilled to see some of the older kids going back and forth where I'd never see them before and even some of my big first graders going to the cafeteria. If they happen to see me if I'm walking by or standing there greeting my class and I get you know, all my lovelies. So I think that's fine, I like that

R: good, that's good

T: I'm used to being really isolated so it's been great!

R: so has I guess, is there anything you can tell me, I know that this area was kind of the hub for different offices

T: yup, the main office was there and um, you know I would just always check in everyday just to see if there was anything going on that I need...sometimes there's messages or people drop off stuff, just to say hi to the secretary, you know, the custodian, those are the people that you really need to talk to. And um, so it you know just sort of check in every day on my way back and forth to the mailboxes during this half hour break

R: so what would you not considering what's going on here at all, but when you were there, what were things that you wanted to be better in regards to communication?

T: well...um, if kids had different pick up/drop offs for dismissals. I mean that's always something that somebody would go to the office for. Sometimes I would, sometimes I wouldn't. Uhhh I love hearing you know when the other classes were going on their field trips because that's always a big grand event and that's when you'd see the kids coming and going and they were pretty excited about it, to share. A lot of them would like share that with me you know. That's why..."how was the apple trip" it's that kind of thing. So maybe just to connect with the kids on some of field trips versus the teachers or the teachers for the [REDACTED] trip..."how did it go?"

R: so you actually don't require that much collaboration with other teachers?

T: I would just really, the ones that I would need to collaborate with would be my grade and the grade above me, you know. Right now, some of those first grade teachers are really struggling with some of the academics of the first grade students and I want to know if they were mine. Oh yes, so this one takes a while to warm up, that kind of thing. So you always have to collaborate at the beginning of the year and at the end of the year "who's coming?" and getting those class lists balanced...so that's huge.

R: is that something that the space here prohibited or aided? Because you were close to the first grade.

T: yup! And they always used to walk by and it was really distracting to them sometimes if they were in their...in the halls getting their backpacks and stuff um, but I would definitely check in, yea, we would "come here a sec - look what's he's doing, he's got a nervous tick, is that common? You know he's got some sensory issues" you can tell that's he's not wearing a soft shirt today, things like that. So yes, that would be something that would happen but I don't have that luxury now that the first grade team is on the other side.

R: ah, so that part has actually been worsened I suppose so you have to make more, is it just a conscience effort that you have to go more out of your ways to have those interactions occur

T: yea, is it far? No, it's not far. And it happens! Because we do need to check in

R: because that's what I'm looking at to, not just are you collaborating on the things you need to collaborate with the students but are you able to have spontaneous social interactions with other teachers cause that' kind of shown to just improve your overall just satisfaction with being at work and happiness with where you work

T: well, our social committee does a great job with that. So once a month there's a shower, retirement, wedding, something that we have to celebrate. Our staff meetings twice a month, I think we're bringing snacks now, it just makes a little more social and less strutted

R: and has that changed at all from [REDACTED] to here?

T: I don't think the last two we had snacks haha

R: but there was still a social committee and things were arranged...?

T: yes, yes, I was three years on the social committee. I always wanted people to maybe go out to happy hour on Fridays or something like that. But we didn't....I was really young then and you know, I keep telling people that we should be doing that but we don't, we don't

R: My mom's a teacher and they do that sometimes so...but not, definitely like different I guess, groups within the school

T: I mean, yea, I don't know if it's always grade level but who connects with who. It's a caring bunch.

R: have you noticed....from a physical standpoint everybody, at least [REDACTED], everyone was pretty much by grade level and did that influence directly where people were and who they talk to?

T: yes, very much so because they also had the same lunches, same recesses, same specials. So the block scheduling allows for each grade level to collaborate, that's what supposed to be doing. Block scheduling would be the thing that changed it more than anything, more than having a teacher workroom, more than having whatever they call those bump out rooms

R: and that's another thing, my minor is in organizational behavior so I also look at just how the organization is designed and how it affects the things...because they really do interact. You can't have physical space without policy and culture to go along with it. And do you feel, like in regards to...

T: that's true, it's not the space, it's the culture. I really would have to agree with that. And there is not a lot of turnover in this building.

R: I've noticed, everyone's the same from last year

T: yeah, maybe with the exception of filling a retirement spot by a paraprofessional and that's it, everybody is the same.

R: and is that true throughout the district?

T: I mean, jobs are hard to come by so you want to keep that but it's a great place to be. I mean, it's a great place to be. I love this grade, I love the space, I loved my old space and I didn't think that needed to change. It's a very good fit for me and I think that that's...we all make it work across the building. The demands are higher, people get stressed out, we balance each other out.

R: and do you, I guess going back to just the use of the space, I know the older grade that I've talked to definitely take their students and go to the library and go to the cafeteria and use the, they needed that interactive area and that's where, a lot of time when they're moving to those, they'd see teachers on their way and it was a very social event in many different aspects. Now you as a kindergarten teacher, did you require those or experience that?

T: I would go to, with my class to the library once a week. I was able to leave the kids and then um, have that break time.

R: which is why you can't do that now is because...is that just a policy change?

T: mmhmm

R: I didn't know if that was because the library was kind of different, it's smaller here

T: yea, but I still go to the library. Another nice thing that we do and several different classes do it. We have book buddies so I've always had the fourth graders do that with us and we have hem match up and we read stories, they read their library books together now we're meeting in the library and once a month do a fun nifty project, so that's collaborating I believe with fourth grade teachers.

R: and all that occurred here, yes, at [REDACTED]?

T: It's been going on at [REDACTED] for a hundred years....the gym would be another meeting spot when we have our assemblies. Um...we always did numerous seasonal concerts, performances for Native Americans, they you know, different classes would have....first grade would be penguin follies, second grade would be under the sea so that's when the whole school meets together...is that what you're looking at?

R: yea, those things and their impact. Sort of the interplay between what's provided and what's needed so it's, there's this, there's space and then there's the culture and then there's the needs, or like the activities that you need to do and I like to at where they all interact.

T: then that would be a great example of it because you know, we beam when we look at our students taking leadership roles when they're in a play up there and then you know, you can go and congratulate the teachers or the directors or whoever is doing the performing at the time. So I think that that would be a nice example of that.

R: right and the, I don't know, when, you were so, I guess a very different case just because of where you were located...

T: I am! And you know that's always the case. You know, how unique I am...inside and outside I guess.

R: It's not a bad place to be though, I don't think

T: No! I never, I liked, being there so you know...people we're sure what grade they were going and buildings were changing and I didn't have to...so I thought that was great. I mean there was the buzz about...so I'm, it's great!

R: any other comments just like, just from what you've observed at the school, maybe not what you've experienced but what the other teachers liked and didn't like

T: yea, well, the only other thing is this teacher workroom here, I don't really, I've only seen like two or three people eating there at lunch (first floor teacher room), you know the paraprofessionals would go in there. It's a much smaller space and I don't know if it's real efficient so, I've never seen, I never go up in that teacher workroom ever.

R: oh, so even now you don't eat in the teachers' room with the other teachers

T: no, my lunch is now! So I don't go up there to eat alone, I just eat down here, and they...the other kindergarten teacher and I will either have planning periods or go for a walk. So she and I can hang out but nobody else is free at that time.

R: and she was at [REDACTED] but had a different schedule last year?

T: she was sped last year and the year before she was morning kindergarten at [REDACTED] and then afternoon at another school....so tough to collaborate when she was in her car a lot of the time.

R: so now she's here all the time, is that right?

T: morning and afternoon

R: and do you have two different, you have a morning class and an afternoon class? They're all half day?

T: yea, and it is, you know, my room, preschool room, and then her room is at the end.

R: oh! And how do you feel about that? Kinda having that separation?

T: we were kinda hoping that we would be closer together but I don't know that they thought it would be another class and they didn't want this room empty or the end room empty, you know, just for supervision for the kids. So it ended up working out fine. We didn't know preschool was coming, we just thought maybe we were making room for three kindergarten classrooms someday. Um...and then that room um, got filled because the [REDACTED] High childcare/preschool program, that building had to renovated so they were hanging out here for a temporary situation which now looks like it might be the

rest of the year

R: oh but still not permanent?

T: I don't know if it will be permanent, I don't know. But it's, it's ideal for them and it's great for us because this is a little?? wing, we have a tiny little playground right out here just for us, we have access to see when the busses are coming and going, who's' coming in the building...so we're happy with the way this turned out too.

R: good! Good!

T: I hope I'm of help

R no this is good! Because it's good to get different perspectives. Because I think what I'll find is that it's not, not going to be one clear, these are the changes that happened from this school to this school, It'll be, from the teachers who were in this area, this is the impact they felt being in this facility. but the teachers in this area....and I think that will kind of paint the picture of what teachers really need and kind of seeing, especially compared to what subject they teach and what their classroom needs are

T: well, I still think that it will be okay because everybody is still together but you know, kindergarten we're just a world of our own.

R: they're just getting their feet wet! I miss kindergarten

T: it's good stuff, really good stuff. I love it.

T: not an official strike, it wasn't like that. No, it was not strike, I don't believe anybody strikes but there was something that was like doing work to rule, and we were doing what we were supposed to do. And so many of us, if your mom knows, you just go far and beyond, you know. We're buying everything, we're here til 8 o'clock at night, it's just...so work to rule is just "do what the terms, what the contract says and nothing else"

Teacher Interview, School C→D, Spring 2012

R: Some teachers, you know, only focus around their grade level but you kind of have a view because you work for the whole school.

T: Well I only work with grades 1 and 2, there's another music teacher who does grades 3, 4, 5. she was at [REDACTED] which was in the [REDACTED] building last year. It's [REDACTED]; she's part time so she works in the morning. I used to do the whole school when it was just [REDACTED] but then once they merged the population of [REDACTED] and [REDACTED] then there were a lot more first and second graders, like double, so then I went to grades 1 and 2.

R: so at the old school how did you feel you were able to communicate with teachers and collaborate as much as you needed to?

T: good, it was good. and in some ways it was actually better because we had the auditorium which, when I do shows cause I do shows with the kids, like 4 of them a year with each of the extra classes that they put them in with us and so we'd do extra rehearsals during lunchtime like during my lunchtime we can do stuff on the stage...

R: but since it's also a cafeteria you can't obviously...

T: the only time we can do stuff is during the um, is after 1:40 which is when my second class is starting so when we get closer to the show time, we will come and go in there at 1:40 and they're still cleaning the cafeteria just barely so we'll go in and set everything up and you know, because it's multi-purpose room really. (announcement) so I gotta do a little lighting and the sound and that takes about ten minutes to set it all up, can't leave it set up because it's a cafeteria. It's kind of a step back in my opinion, for me.

R: from like the kids perspectives, you know, teaching music, for sure. And is it, what about just like seeing other teachers? Because I've noticed a lot of teachers that I talk to have mentioned that they see people more or see people less

T: Less, less

R: in this school or in the...at the last year you saw people less?

L I saw people more at the old school because, I dunno, it was just a smaller school. It's easier to....

R: even though you're, because like for me, even though you're closer to the door...that you still...

T: yeah, um, well I mean I see a lot of kids at lunchtime because I'm right next to the cafeteria

R: I've noticed that a lot of the comments are just that the schools are bigger and that just makes...

T: yea, a lot bigger and I'm not seeing teachers...and also like the grades 3, 4, and 5 teachers, some of them I had worked with I was at [REDACTED] but then there's other teachers who were at the [REDACTED] school, I don't even know who they are...you know, so there's teachers in this school that I don't know and when we have staff meetings, I go to the high school because that's where I am all the morning. I do my staff meetings at the high school

R: and where in the school last year did you...

T: I was in the basement, next to the girl's room

R: ah okay, yup, music, right there....and, would you, would you see the others teachers on the other floors or what was your interaction with the school like how often you saw people....

T: well, I would walk around the school. It was easier to just travel around. You just go up a flight of stairs and down the hall and that was basically it.

R: and was that when you needed to do something or just when you just wanted to walk around and see people

T: uh well, if I needed to meet with somebody and you know, give them a script or give them, go over, make sure they got an email that I may have sent

R: so here does that not occur anymore?

T: um, I try like after school I'll often sit down and try to catch them as they're getting their kids lined up and everything. It's, it's just not...everything's a little different. There's more space to travel it seems

R: yea, did you spend much time in the teacher's room last year?

T: last year I spent more time in the teachers' room yea. Not much. I mean I'd also bop in there like every day and this year, it's like I Don't both bopping in because you can see through the window so see who's in there and it's kinda like okay, well, there's no room to sit down anyway...that's kinda

R: the window that's supposed to encourage people to come in actually discourages it...

T: I think so, isn't that weird? I never thought, I didn't think that way. but it's like oh okay , I can see who's in there I'll know...oh they're all busy talking, that's right, I won't both going in. that's kind of what goes through my mind when I...

R: so what do you, other than the auditorium, what do you miss about the old school? I know you said it's smaller and it had an auditorium where there any other beneficial things?

T: I liked having, I liked having a carpeted room. I liked the smaller....this room, it's nice to have a big room, it's nice to have the space but like when I have a chart up for kids to read, you know, words because we don't have books for the kids, I have to make things really, really big so we can see because they're sitting all so far away. The spatial thing is different. So I don't know if I could work on that more by maybe pulling that, if I could move that carpeting up...I've been pulling it up. it was farther back and bringing it up here so if we're doing something up here, this is the space there and then there's the, you know, moving space that's more available so I don't know. It's just still getting used to the area...it's just practical things like having shelves where instruments were easily accessible and not in another hallway around a corner or tucked away back in things so before everything was like, you could grab it, it was just right there because it went around the whole room. So it was within arm's reach almost.

R: Now, is there anything you really like, that you're glad, like negative things that you no longer have to see from the old school

T: Well, the old school was kind of musty in the basement and I always had the can of air freshener that I'd always spray. kind of get a little you know, there weren't any windows, course there are no windows here either, well there are windows into the hallways, so....that's, that's nice and it's cleaner, a cleaner building, a cleaner environment. So

R: yeah, any other benefits of this building? Maybe not necessarily even negatives about the old one but things that you've received or experienced this year that you didn't at the other school?

T: (long pause) I don't know... I guess maybe the technology stuff, although we had a fairly large TV that I'd use to show stuff...um, tried working with the iPads one time which was interesting. Stuff that I used to do with paper and pencil we used the iPads instead but the kids got too distracted doing all the other things that the iPads can do. So I guess, you know, once they get used to it and the novelty wears

off it might be easier to use something like that.

R: right, that's definitely why I'm going to do my intensive look at the school and abbot downing in the spring cause hopefully everyone's had more time to adjust and really kind of own the spaces rather than it still being new

T: right, trying to make things work. You know like [REDACTED]'s got her little desk there, usually these chairs go around; I have to put them back. And I'm still working, I've been trying to get, I've got one shelf over there, trying to get more shelves here so I don't have my stuff sitting on a chair. You know just silly kind of things...

R: so do you notice, one thing that's come up is having two different floors creates almost a barrier between the two. Do you notice anything?

T: I guess, I never go up to the second floor so...there's no real reason for me to go up there. Although I used to go up to the second floor all the time, well the auditorium was up there, that's right

R: so you had a reason, if the auditorium wasn't here, do you think you would have gone?

T: I probably would have stopped up because there were teachers that I would bop in and see, the teachers room as on the second floor so that would bring people up just to stop in and say hello just to see what's going on. But yea, having the auditorium there that's pry what because I would decorate the auditorium, the stage, and stuff like that. It's different, just different dynamics

R: Yea and I'm sure it'll all, you'll have your own rhythm but...so overall how do you feel, not even your own personal communication but what are your opinions of what you've observed other teachers and how they communicate in the old space compared to the new?

T: ummm I don't know...it kind of seems the same...we talk, you know, kind of catch each other in the hall of you know, a lot of it would just be at the end of class or I'd catch them at lunch time.

R: gotcha, now, do you still, do you eat lunch here?

T: no, I eat at the other school

R: now, you're at the High school, is that what you said?

T: mmhmm

R: cool, alrighty, well anything else you would like to add about the buildings?

T: no, it's a beautiful building! Very nice.

(we talk about my perspective for a while - good for me to listen to later on)

snippets:

R: I think the transition was easier for you guys because you came from a school with multiple levels from those kind of nooks, you didn't have just one long hallway. So I think the transition was probably easier for you guys than it was for them. Which is why I think they are going to take a little longer to adjust but I think the schools are beautiful! I hope that as soon as all the learning curve and growing pains are surpassed that it like, get implemented very much. Do you think that you'll have any use for the group spaces or anything?

T: I don't know, I've heard that some of the teachers suggest that we use those when we can't get on the stage. I don't know how that will work being outside of the classroom with them having class and us singing out here.

R: well I talked to [REDACTED] and she said her class was singing in the amphitheater earlier today and she said it was wonderful acoustics.

T: oh great, well, we'll have to try that

R: so that should be a great area. So it'll be interesting to see what happens so...we'll see. So we'll get a bigger, better picture of this in the spring

T: now when the amphitheater, she means the one inside here. But there's no room for an audience to sit, is there?

R: I think there would be room for a small audience, I think so yea, cause she was saying they were practicing for a concert they're doing next week.

T: that the musical?

R: they're signing at the memorial service, at the cemetery

T: oh, oh ok cause I did hear them singing the national anthem when I came in this afternoon

.....

R: that's another issue, if you have any comments, do you think that collaboration is really encouraged here, especially for you

T: I don't, see, like [REDACTED] said that all the music teacher were involved in the decisions for making the space and everything like that but nobody ever asked me anything. I take that back, I got one email asking what kind of piano would I like and would I like an electric or acoustic and I said well electric would be fine, you know, as long as it can do dynamics and it has a peddle and everything. An acoustic would be good if it was low because when you're playing, not on an electric which we use, because there's the acoustic which, if I play at the acoustic piano I can't see the kids because it's so high and you know how kids would be....but that's what I was asked

R: you didn't get any input in regards to the space design or acoustics or what you needed in terms of storage?

T: (shakes head)

R: that's a shame! That's sometimes interesting that how, despite an architecture firms best attempts or what they think are the best attempt what gaps end up being missed and I think that's an unfortunate trend I see a lot in the field. Cause that's what I enjoy most is talking to, because I did architecture as an undergrad and so I kind of what to position myself between architects and the client and really be the one that's getting to know the schools so that they're designing for and can really help shape them, the facilities they need so hopefully whenever I'm in field that won't be a problem

T: yea, that would be good. It'd be nice to hear from, to really talk to the teachers cause nobody ever...or if there was some kind of meetings, I didn't know about them or I didn't realize we are discussing musical things. If you have any input for the music rooms, any concerns, let us know and I don't know...maybe I was absent that day or something. I don't know, they didn't ask and they didn't ask the other music teachers either because we've all talked about it before. Why didn't anybody ask us?

R: wow, that's a shame! it's interesting because the architects are the ones that approached us to do research here too so obviously they are more involved with the client so it's sad that even they have missed the mark on some aspects

T: or there were just other people that were speaking for us, they took that

R: that could be too, I think that sometimes it's easy for administration to assume what you need

(off the record)

T: and that's what we kept hearing...don't ask us what's going to be there, however it is, it's going to be perfect. That's what we were told. I mean, that's something that we were literally told. So don't....like I was saying are there going to shelves in the room? Are we going to have shelves so we can have stuff out or whatever?

(back on the record)

L...but it's a nice building, it's good. I don't like the windows.

R: no?

T: nope

R: why is that?

T: because kids look in them and it distracts classrooms.

R: I see, cause I think the intent was to help connect all the spaces and make it feel....but there is always the distraction factor

T: yup, it's for first and second graders they just can't help but look out and see what's going on. They just can't help it so that's my competition. They can't help it, there's a window you gotta look! That's what is' for, to look through!

R: and I think when you're in an academic classroom and doing something tedious it's nice to have that at times but it also, for grade level wise you probably need different affordances

T: I even get the first graders; they'll crawl forward just so they can look through that bottom porthole to see who's getting a drink or who's going to the bathroom...maybe if it wasn't right across from the bathroom it would be different.

R: I've noticed that, the other school too, wherever there's a bathroom it tends to be, because there's so much traffic there so it's just so much more distraction is possible.

T: that and the stairwell but I did get permission to get curtains to put up...I just have to get around to making them.

R: oh great! Well that'll be good

T: yea, that'll help cut down some of it.

R: great, well I'm excited to see what you do with it!

Teacher Interview, School C→D, Spring 2013

R: So why is it that you don't move around as much? Just the location of the room?

T: this is like the, the music room is right at the hub of the school, main office, bathroom, cafeteria are all right here

R: you don't have anywhere that you need to go. Whereas what was the case in the old building?

T: I was in the basement and if I needed to see a teacher I would go upstairs and I'd find them and up to the teachers room which was on the upper floor so it got me moving around the school a lot more

R: and do you use the teacher room here?

T: nope

R: and why is that?

T: because I eat at the other school

R: oh that's right cause you are kind of co-located, so are you there every morning and here in the afternoons? So I guess this is interesting, so what do you find works better or differently or worse at either of the two facilities since you kind of experience at both.

T: between the two schools?

R yes, Cause I'm also doing this over at [REDACTED] so if you have anything to speak of or differences I guess in the designs

T: at the high school?

R: oh you're at the high school! Ohhh okay then never mind. I knew there were a couple of teachers work at both [REDACTED] and [REDACTED] so I guess I always assume that they go together. Ohhh okay, gotcha, so you're just personal schedule has been different.

T: yea I'm there in morning and here in...

R: frommm I don't know how much you kinda of interact with all of the other teachers, do you notice any general morale differences or kind of general community kind of changes since you've been in the new building?

T: no, I just don't really see people as much. I mean, people walk by but it's I feel more detached now than I ever have

R: do you know if you think that's just being at a new place or do you see that maybe improving in the next couple years?

T: ummm I dunno, I mean everybody works really well. If I seek somebody out, if I need to talk to them about something which I will do and seek them out or they'll stop by you know, just stop by "oh, we have rehearsal, what time again today" you know whatever, we do that

R: so do you see, just so I have an idea of how to organization works with teachers. Do they have set times that they come every day and is it multiple classes at once or just single?

T: nooo it's just um they have their music time, used to be only once a week now it's once a week and then some quarters they have it twice a week so to make up for...

R: and it's the whole class moves here and then moves back to the classroom

T: yea they come here for 45 minutes for music and then they go

R: yea I didn't know if it was something to where you kinda can choose where you go to cause I know when I was younger we had to choose between like music and art and that sort of thing...

T: oh wow, and that young?

R: well, maybe it probably started, probably around 3rd and 4th grade because I didn't do art very long which is sad cause I wish I did both.

T: ohhh I'm glad they don't do that there. Kids start to have to make choices like in middle school

R: ohh okay well that's good

T: I think they should all have art, I think all the way up until 9th grade. I think they should all have art and they should all have music in some way, shape or form

R: oh completely agree with you

T: phys ed

R: yea, all of them are important, do you notice if there's maybe more teachers than others you happen to run into more than not?

T: ummmm no, same as....well, I don't see [REDACTED] anymore because I used to go up and visit here and now.....all the time and I kind of miss seeing her and I think she's in the library and I know she has some assistants and she had them before but somehow things are just different this year so I don't see her. I usually bop in and see Ms. [REDACTED] at the end of school. Just to you know, how are things going, talk about the students, how's the new classroom

R: right, no that's exactly because kinda of what I've been looking at is a lot of research has been done in typically work places like offices on how to help improve informal collaboration so they run ins you have with teachers and things, cause those in office spaces have been proven to be very important and they greatly help improve morale and productivity. They're just very beneficial and so, I'm applying a lot of the research that's been done there with the same theory that it's important for teachers to also have the opportunity to collaborate, just informally, and just you know, say hi to other teachers and that sort of thing. That's exactly what I'm looking at is kind of how the space and structure of the school

T: I used to go stop and look for....because she was in the basement too last year so either I'd stop in or she'd stop in

R: so was it mainly passing by other teachers getting to places and then actually proximity to where you are, are important....and what about organizational factors I guess from the administration and principals and how do they, how do they support and view those types of communication?

T: I don't know, I have to be honest I have no idea. I'm sure they support them and we use email a lot just to backup things and copy people all over the place.

R: and what kind of, how were you guys informed of the move to this building and kind of the transition. Was there any type of, I guess training involved in terms of: this is a new space and this is the changes we expect to see or anything like that or was it just like, plop you in a new building

T: I didn't know what was going to be...and now I was told that we had a meeting and everybody was

there...but I didn't know about it...I guess I wasn't in that group or something

R: cause that's another important part, is that kind of the communication between, about the design and about changes and how those can impact what actually occurs cause often that's the reason that things don't end up being the case so if they wanted communication to increase more, a lot of the time that could happen with the space but it doesn't because it's not as supported as it could be from an organizational standpoint

T: yea, I wish I wasn't where I am

R: where you prefer to be?

T: I'd rather be on the end of ...anywhere else on the end of the hall somewhere or something or, I dunno, right here is just always noisy because the lunches don't get done until 1:30 and I'm starting my second class at 1:30 so it's just all the lunch room stuff and constant people walking by and bathroom use and going up the staircase.

R: lots of activity

T: it's all right here and they sit there and they see everybody going by and up and down

R: so do the students get distracted with the windows? Because I know that can sometimes be a positive thing but not always

T: no....no.

R: so any other comments about the school at all or your past kind of six months you've had here?

T: well...it's good.

R: well, awesome, well that's basically, no, those are very helpful because there's a lot of things I kind of assume just looking at the designs but I need to actually you know, just for research sake here them from you guys to actually kind of speak to what could be done differently because the whole goal---

T: with as many lunches as we have, having the stage and the cafeteria and the fact that that room is used so much after school which in...It effects the after school drama productions and stuff like that. They can't use the stage because it's after school space for the....I wish they'd just have a stage place separate from the cafeteria.

R: and you mentioned just scheduling wise, has that changed coming to the school or all the class times the same?

T: well I used to have a lot of extra rehearsals before shows and we'd do them during the lunchtimes which I obviously can't do because they're having lunch, or the other classes are so if I take one class or one or two classes to a run through of their show that they're working on because we do one every marketing period, I can't do it because of the cafeteria.

R: so why were you able to do that at the old school?

T: because the separate auditorium.

R: because you were in...Which building were you in last year?

T: Walker...and I would let the people in the auditorium, [REDACTED] talked with tutors in there and I would let them know a week ago, the Friday ahead and she would put their computer class with the library class with that one class. So I, we could do a dress rehearsal on a Friday afternoon there and

lunchtimes just didn't affect her classes so I got all my extra little practices in so I could use the auditorium space during lunches and recess time and....not have to interrupt class....it's a, it's working out, we're doing...

R: we make it work

T: yea we just make it work

R: you teachers are so good at that... So what do you think the biggest driver, is it the space or is it the scheduling to any kind of issues that you have?

T: space

R: space, yea, just adjacencies. I bet they put here just they assumed oh music's loud too so we can put them all together....gotcha...

T: well when you're trying to listen and focus on things there's just so much going on.

R: mmhmm, definitely

T: when I walk around I go in the others parts and I'm like, I just wish I was anywhere, anywhere, actually anywhere but here

R: and is that maybe the noise? Is that the biggest kind of number one?

T: the noise and like the...

R: yea, distractions... and you, besides from the students getting distracted, like you as a teacher and your relationships with other teachers, where would you like to be in the school or what would help improve that?

T: I think, I mean I'm fine. I'll seek people out no matter where I am. It's never...you know, when I was down in the basement I still would travel where I needed to, who I need to see.

R: and do you think that's mainly for actual, like, purposeful you need to know something or is it ever just for social, you want to say hi to someone

T: oh just for social, I would go up to the teachers room at the old school just to say hi and usually I...and sometimes I go...very seldom. Maybe three times have I ever sat in the teachers' room for thirty minutes or something like that?

R: but here you don't...the informal/social as much?

L: um no....just after school sometimes, we'd talk or something...

R: gotcha, great!

T: yea, it's good.

R: yeah! Well good, I mean, the school's beautiful.

T: It is

R: and hopefully, with time I think my professor is hoping to may be continue on at least, she's working with the students and looking at how their engagement has changed with the new facility and she's hoping to make that kind of a couple year study cause oftentimes it takes a couple years to really kind

of see how the space is used because there's always the adjustment period but I'm trying to graduate in May so...I can only look at it now which is unfortunate but I'll be interested to see how it evolves over time cause I'm sure it'll be a little different in a couple years

T: yup, I'm sure it will be.

Teacher Interview, School A→B, Spring 2012

R: we are backtracking and kinda thinking about last year's school.... (chit chat) so to kind of to think back like you're at [REDACTED] because I'm trying to get a good handle because of the way timing worked out with the communication log and everything with the union strike and just various circumstances I thought it would be helpful for me to go back and get a little meat for my data. My goal for this study is...

(interrupted and had to move)

T: As you can see we use the areas

R: no that's great! That's a good sign. My goal and kind of my research in general is all about space and how it impacts...so at [REDACTED], some of the, I guess to give you an idea of what I collected, I have a map of the building kind of laid out and all these numbers are the instances of communication that occurred at each location. So as you see, there's way more here which I believe this was your classroom so a lot of them occurred right outside there.

T: Right and the um, actually this area right here was the...worked with me.

R: So that, X is the [REDACTED]-

T: Mrs. [REDACTED] or yes

R: Ok great! That was the one classroom that I was like...she said she talked to this person but I actually don't know

T: That was the special educator so that was very convenient for me to constantly be having these communications with her

R: And is she someone that all teachers would communicate with one point or another.

T: She's the special educator for our wing

R: oh, so there's another one for the other wing

T: Yes, yes, um let's see. I forget who it was last year

R: so they were purposely put just kind of to the groups in which they worked

T: Yes, it worked out that way, yes

R: so does it work out to where you only really need to talk to those teachers that are next to anyway just because your rooms are closer

T: In most cases yes

R: It's nice to have the opportunity for spontaneous kind of interaction, you'd see them...

T: It made it difficult...

R: I guess drivers in terms of location choice

T: What do you mean by drivers? You mean by need?

R: yes, and did things like that happen at [REDACTED] as well?

T: they did, morning and then she shared what she knew and....

R: and it's those short conversations that I'm hoping it's designed and the visibility between groups. So where would you ever find yourself communicating the first and second grade wings or where do you think it mostly?

T: um most of my communication was in this area, right outside my classroom and in the teachers' room.

R: and so, in the teachers' room, is that all, did you spend lunchtime there or was it planned times when you had meetings or was it just during that time?

T: It was mostly just during lunchtime that we would touch base. We had a couple planned meetings but I didn't notice that it showed up a lot that they were in my....like a lot of times we were just in my classroom afterschool and I probably didn't indicate that on a regular basis obviously...

R: you did a couple times, I don't know why it didn't get on there but yes, I remember you had that you had talked in your room

K right, most of mine was in this area and....

R: now looking outside just your own perspective, where do you think the most communication occurs in the school between teachers?

T: In general?

R: In general yes, outside of the teachers' room, like when you walk by. I, and there was one area, I believe that's right here where there's a bench and I guess that's outside of the teachers room. It's a kind of a hard picture...

T: This actually was, let's see, down in this area...but um, as you came into the building here, it was right in front of you. So it probably...and the office is...this was the counselor and this was the nurse so it's possible.

R: I guess [REDACTED] didn't catch that I had it in the wrong spot.

T: Oh okay....so this is actually over here between the first and second grades and you've got the nurses office, and the counselor, so that's that cluster right there.

R: so lots of stuff going on there, cause [REDACTED] seemed to think that that was a hot spot for people to kind of talk

T: it could be yes...and this was the main entrance to the school as well so a lot of times somebody was right there

R: so since that was so far from your classroom did you tend to talk there?

T: no, not really, a lot of times, I would be thinking...What do I have to do....trying to like hit it once a day to go up there and do whatever I needed to....long distance that wouldn't have bothered me but...

R: now that leads me to, something else I'm focused on is how the organization supports these kinds of interactions so both the spatial things and those affordances but then also, is it accepted by the administration and the school to stand talk to a teacher in the hallway for a couple minutes and those sorts of things so at [REDACTED], what was the kind of culture, I kinda, I guess when it came to...and do you think the hallway was an acceptable place to have those in terms of just confidentiality or various

things.

T: Um, yes, because you could see who's coming and going, yes

R: Interesting, because it's very different here so I wonder if there's a little more concern

T: It is different, and it is, at this point, we'll probably work it out but at that end of the building because it's so open.

R: the amount, the frequency of use of the hallways has changed from [REDACTED]?

T: ...reason that was unusual for me to run in to the counselor in the hallways. In this case, if one of us has to make...

R: and was that the case at [REDACTED] or was it easier?

T: that you would run into someone in the hallway

R: (unintelligible)...said that the same thing that here it's a little more segregated so at [REDACTED] it was kind of all on one floor so it was just easier to kind of run into people which I mean, there's been a lot of kind of where I've pulled research from has been office spaces and that's kind of the key thing is proximity and how much you see people and I was wondering if you know, because here there's more windows between classrooms and different things like that to where you can see teachers but we don't know if that will make any sort of impact. Um so what about collaboration like formal collaboration between groups at [REDACTED]? Was it ever to where you were required or really encouraged to work with other teachers on certain things?

T: Well we collaborate C-Time. It's not really a work time for us....

R: and who was on your team? Were they the same grade level?

T: yes, and I mean, I consider Mrs. [REDACTED] to be on my team as a....study.

R: yea I saw all the projects

T: yea, requirements for them to be, and um, I don't know if you're familiar with the school district, well that's where we actually had....and so we'd go and we'd have five rotations....and as well as their own lunches....a lot of coordinating and planning and a lot of that is done during our planning periods or after...

R: that sounds really fun

T: it is, the kids really enjoy it and learn a lot

R: so, I guess just taking a step back and just thinking about I guess the spatial aspects again, just outside of even like the particular designs of [REDACTED] or even this school, what helps and what hurts?

T: well, the time, could necessarily available and it's not so much our teams members cause that works out....you know I said I feel kind of bad talking about things...not running into people. At [REDACTED] it made it a little bit easier to run into people...the time just....I would bring my kids to the library a lot because I wanted...if you remember, the cutting...the cafeteria which was right across from me.

R: So it was when you brought you class out where most...occurred

T: yes

R: Now was there ever a time where you could be in your classroom and see someone in the hall where you could go talk to them. I don't remember if there were windows in the rooms or if you had open doors

T: yeah, I usually keep my door open and occasionally that would happen especially, specials were walking by and oh yea...I wanted...watching somebody walking by was a way that I....

R: was there certain time of day when you would randomly get to talk to people more often than others?

T: I guess thinking about would probably be first thing in the morning, between 8 and 8:30...often a, a time when...I think those times, and occasionally there were also times when say....remembering a reading specialist and then going to pick up another group so in that transition time, F & P or something that like....

R: this is really helpful, and uh, the way the teachers' room was laid out, what was good about that in terms of meeting and what was not as helpful?

T: um, I think it was good. It was a pretty central location.the place where teachers workroom

R but they were attached is that right?

T: yes, on the same thing there...we don't have...

R: and do you think the spaces are ever avoided?

T: I was avoiding this space for a while....and the reason being, we've gotten a lot of new technology....not comfortable with all of it, it seemed like all of the conversations were about...

R: the ones in the teachers room here? (at [REDACTED])

T: the ones in the teachers room here, yes. I just felt like it was making me...so I kind of wanted to get away from it, you know. So I found myself eating at the table out here...I haven't stopped going to the teachers room completely...."hey we miss seeing you in the teachers' room!" and I've just said "well I've had some things to do in my classroom" or whatever, today I ate in the teachers room and it was fine so I think it was just the initial, the technology was new for everybody and there were glitches and people were talking about how to work it out, and I tried a new app, and I just felt like, you know...but I think it's settled down a bit

R: That's interesting! Because a lot of literature talks about how that is beneficial to have that knowledge sharing and that time, that they don't really talk about how we, they don't really talk about how it could be kind of just, too much and overload

T: yes, it was overload; I felt it was overload for me

R: so what kind of, at [REDACTED] I know you were much more used to the space and there weren't all those changes but, what types of communications would occur and was there any situations like that at [REDACTED]?

T: um not that I remember. Umm and most of the conversations I'd say were personal, you know, more sharing that way or um, we might talk about something that happened in a meeting, you know, continue a conversation. It wasn't any, I don't remember feeling uncomfortable.

R: and looking at the interplay between the teachers room and the workroom and I know you said it separates the work from the social, could you also see that in the communication that occurred in the two spaces?

T: teachers room is more eating our lunch and it was social...be in there...and then when you were in the workroom it's not necessarily all people in your team or, it's not necessarily all the same people so your conversations are different because I might go to run off something so the conversations gonna be different than...

R: right because kinda of, the amenity there forces you to go there even with people that you don't really need to talk to. But is it helpful to see them there?

T: yea! a lot of times it might be, you know, you run in to somebody you don't expect to see so your conversation is going to be about a child that's....eating...but tis' just....how (unintelligible)

R: so would it be safe to say, this is just what I'm getting, that the teachers room is more like you went to lunch with people you knew would be there and you knew what the conversation but the workroom as more where the spontaneous unplanned things would occur

T: yes, yes

R: cool, that's really interesting! I keep wanting to ask about here, because that's really what I'm interested in so I'm like, so does that happen here too? So is there a centralized workroom here too, as well, cause I notice there's a printer right outside your door, I didn't know if things were scattered

T: um yea that printer hasn't worked since school began but there are three other printers on this floor and there were two copy machines...one is right in the teachers....so I haven't really notice that it interfering with our...if someone comes in to run something off it's not really a bother while we're having lunch. Because we had even, we've talked about perhaps having one teacher's room...just a workroom and the other one being just a social space....seen they're both a combination....problem because we were used to having them separate but it hasn't really been a problem.

R: so anything else to add about just the space at [REDACTED] and what worked and maybe what you missed? Is there something that you missed from [REDACTED] that isn't here?

K....at a staff meeting I asked if when the building was designed they thought about...asked about...possibility to put it around some of the open areas....took them to the library it was when thedown here but I'm aware of the noise level, you know, third grade goes in the middle of that time and I already mentioned first grade coming in at that time so there just seemed to be a number of, and then the whole class going to lunch because that would be like okay, everybody is going to go and that from 10-1130 I was...only because I think I was looking...it would be great for doing read aloud and it just hasn't worked out the way I had....

R: yea, there's always a learning....to use the building

T: Right and I didn't have this table; I just got this table yesterday that's why it has no chairs because I had to do parents conference! Now, I had to be aware if somebody is going to be using it. I had thought of it as "this is a kid's space."

R: and was there any sort of kids space like that at [REDACTED] or was it all just in your classroom?

T: Um, I would often send kids cause I was so close, I'd say "go in to the cafe" and we would be going in between the cafeteria

R: and what would other teacher's do, do you know?

T: [REDACTED]. was the hallway...have you been to [REDACTED] at all?

R: so there was the space right in here, this was, well, wait a second, where are we? where's [REDACTED] classroom...okay...this space, there's a...to get from the [REDACTED] eon there's a big hallway here and

█████. would often has his kids working in that big space....often be trying to get through but it worked for him to have his kids in the hallway and then...I was more checking back and forth